

County Council of the Parts of Lindsey,  
Lincolnshire.

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# ANNUAL REPORT

UPON THE

HEALTH & SANITARY CONDITION  
OF THE COUNTY,

BY

R. ASHLEIGH GLEGG, M.D., D.P.H.,

MEDICAL OFFICER OF HEALTH.

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1920.

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**To the Chairman and Members of the Public Health and  
Housing and Maternity and Child Welfare Committees  
of the Lindsey County Council.**

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SIR HICKMAN BACON, LADIES AND GENTLEMEN,

I have the honour to present the Thirteenth Annual Report of the County Medical Officer on the health of the administrative County in 1920. It is satisfactory to be able to record a very distinct improvement in the birth rate as well as a lower general death rate than in the previous year. The reduction in the rate of infant mortality so noticeable in 1919 was continued in the year under review. There is still a very high death rate amongst illegitimate infants under one year of age. The law in regard to illegitimacy requires to be altered so as to place much greater responsibility upon the father for the care, upbringing and placing out in life of any child born to him out of wedlock. This is a reform that is very urgently required, and would be of threefold benefit. Increased paternal responsibility would reduce illegitimacy, would prevent a considerable number of infant deaths, and would remove a great injustice to innocent children.

The section of this report dealing with the Council's Maternity and Child Welfare Scheme has been prepared by Dr. Annie T. Brunyate. It gives full details of all the measures that have been included in the Council's Scheme under the following headings:—

Home Visiting by Health Visitors.

Provision of Milk for Infants and for Nursing and expectant Mothers.

The work of the Infant Welfare Centres.

Dental Treatment. Home Helps.

The unsatisfactory conditions found by the Health Visitors in homes, parents and infants are worthy of study. The large number of infants artificially fed is a serious matter. The necessity of early and complete notification of births in order to combat this is emphasised.

I would draw special attention to her report upon the benefit derived by infants from the provision by the Council of milk at a low cost. The great care taken to ensure that none but necessitous mothers receive milk at less than cost price is clearly demonstrated. The need for this provision to be continued is obvious now that unemployment in the larger towns is causing distress, and it is earnestly to be hoped



that the Council will agree to the supply still being obtainable through the Infant Welfare Centres, so that the mothers can be instructed and the infants supervised.

Measures for the prevention and treatment of Tuberculosis and Venereal Disease have been continued on the same lines as in 1919. Details of the work are given in the report. In regard to tuberculosis there is need of earlier and more complete notification of cases and an educational campaign. The prevention of venereal disease is a problem that for centuries has been recognised as presenting special difficulties. To educate the public to appreciate the seriousness of these diseases and to understand the vital importance of early treatment, a Branch of the National Council for Combating Venereal Diseases was formed in Lindsey in the spring of 1921, with local Propaganda Committees in the principal towns. In 1920 treatment clinics were regularly held in Grimsby, Lincoln and Scunthorpe. The number of persons who attended represent only a fraction of the number of cases that actually exist. Much more active measures are required to deal with a disease so disastrous in its effects on the individual and on the race as is venereal disease. It is essential that there should be means for ascertaining cases of the disease, especially those in the infectious stage, and for compulsory treatment.

The County Laboratory has continued to give medical practitioners useful information in regard to diphtheria, tuberculosis and enteric fever.

In previous reports I have given full particulars of the sanitary circumstances in each of the Urban and Rural Districts. This year I have given in the abstracts of the Reports of the District Medical Officers of Health particulars only of any new sanitary work carried out in the year, and a note of what still remains to be done. A departure was made during the year in the joint appointment by the County Council and Urban District Council of Scunthorpe of a whole-time Medical Officer of Health and Medical Officer of the Venereal Diseases Clinic. Dr. Kenneth E. Tapper, O.B.E., was appointed in May, 1920, to act in both capacities. He has organised his department extremely well, and is assisting the District Council to establish a high standard of public health in the district. I should like to draw special attention to the excellence of the work of the District Sanitary Inspectors, especially those who hold whole-time appointments. Their task is a heavy and an ungrateful one, but in spite of discouragement and often lack of necessary assistance and

proper travelling facilities, they have done work for the public health that is deserving of high praise.

I take this opportunity of thanking the Committee and the County Council for the courteous consideration that has been given to my recommendations during the year. The medical and nursing staff have given loyal and devoted service, and I am indebted to the clerical staff, and especially to Mr. Lee, Chief Clerk, for capable assistance.

I have the honour to be,

Your obedient Servant,

R. ASHLEIGH GLEGG.

**TABLE A.**  
**VITAL STATISTICS FOR THE YEAR 1920.**

Group.	Population estimated by Registrar General for Birth and Death Rates.	Births.		Deaths.		Infant Deaths.		Zymotic Deaths.		Phthisis Deaths.		Deaths from other Tuberculous Diseases, including Tuberculous Meningitis.		Deaths from Respiratory Diseases.		Deaths from Cancer.	
		No.	Rate.	No.	Rate.	No.	Rate.	No.	Rate.	No.	Rate.	No.	Rate.	No.	Rate.	No.	Rate.
Borough and Urban Districts	116,095	3045	26·22	1478	12·73	234	76·84	94	·81	126	1·08	38	·32	225	1·93	111	·95
Rural Districts ..	130,961	3211	24·51	1627	12·42	230	71·62	68	·52	106	·81	28	·21	173	1·32	176	1·34
Whole County ..	247,056	6256	25·32	3105	12·56	464	74·16	162	·65	232	·94	66	·27	398	1·61	287	1·16

\* Rates calculated per 1,000 of the estimated population.

† Rates calculated per 1,000 of the registered births.



VITAL STATISTICS, MINISTRY OF HEALTH TABLE 1. (1920).

DISTRICT	Area in statute acres (land and inland water.)	Inhabited houses at census 1911.	Persons per House at census 1911.	Population estimated by Registrar Birth and Death Rates.	Density of Population.	Nett Births.		Deaths under 1 year of age.		Nett Deaths at all Ages belong- ing to the District.	* Nett Death Rate.
						Number.	* Rate.	Number.	Rate per 1,000 Births Registered.		
URBAN.											
Alford ..	1,138	658	3·63	2,297	2·0	44	19·15	2	45·45	24	10·44
Barton-on-Humber ..	6,343	1,533	4·35	6,604	1·04	185	28·01	10	54·05	90	13·62
Brigg ..	462	752	4·44	3,311	7·1	89	26·81	5	56·17	32	9·66
Broughton ..	7,073	322	4·28	1,655	·23	42	25·37	2	47·61	13	7·85
Cleethorpes ..	1,185	4,917	4·35	26,696	22·5	745	27·90	46	61·74	300	11·23
Crowle ..	6,926	705	4·04	3,120	·45	90	28·84	10	111·11	63	20·19
Gainsborough ..	2,406	4,516	4·55	19,971	8·3	524	26·23	40	76·33	244	12·23
Horncastle ..	1,421	1,010	3·86	3,423	2·4	70	20·41	8	114·28	59	17·23
Louth (Borough) ..	2,749	2,626	3·76	9,441	3·42	213	22·56	17	79·81	189	20·01
Mablethorpe ..	3,168	320	3·85	1,329	·42	19	14·29	—	—	19	14·29
Market Rasen ..	976	596	3·85	2,134	2·2	37	17·33	3	81·08	23	10·77
Roxby-cum-Risby ..	4,908	82	4·60	621	·12	17	27·37	2	117·64	10	16·10
Scunthorpe ..	1,032	2,015	5·04	29,037	3·66	819	28·20	81	98·90	326	11·22
Skegness ..	1,922	802	4·70	3,390	1·7	82	24·18	3	36·58	45	16·22
Winterton ..	3,818	366	3·89	1,587	·41	42	26·46	3	71·42	25	15·75
Woodhall Spa ..	1,874	332	4·47	1,479	·79	27	18·25	2	74·07	16	10·81
TOTALS ..	51,444	22,136	4·34	116,095	1·8	3,045	26·22	234	76·84	1,478	12·73
RURAL.											
Glanford Brigg ..	124,003	6,862	4·35	24,503	·2	630	25·71	50	79·36	301	12·28
Caistor ..	120,108	3,102	4·23	10,870	·09	330	20·35	24	72·72	156	14·35
Gainsborough ..	94,706	3,570	4·12	14,362	·15	328	22·83	18	54·87	162	11·27
Grimsby ..	43,201	2,086	5·09	11,191	·25	314	28·05	27	85·98	123	10·99
Horncastle ..	114,153	3,173	4·12	11,605	·11	279	24·04	15	53·76	119	10·25
Isle of Axholme ..	28,070	1,651	4·12	5,603	·19	169	30·16	12	71·00	93	16·59
Louth ..	154,627	4,529	4·03	18,094	1·6	386	21·33	24	62·17	238	13·15
Sibsey ..	21,565	691	4·32	3,244	·15	75	23·11	6	80·00	45	13·87
Spilsby ..	128,211	5,228	4·01	20,108	·15	453	22·52	40	88·30	267	13·27
Welton ..	83,712	2,661	4·17	11,381	·13	247	21·70	14	56·68	123	10·80
TOTALS ..	912,356	33,553	4·22	130,961	·14	3,211	24·51	230	71·62	1,627	12·42
TOTALS FOR COUNTY	963,800	55,689	4·27	247,056	·25	6,256	25·32	464	74·16	3,105	12·56

\* Rates calculated per 1,000 of the estimated population.

1920.

MINISTRY OF HEALTH TABLE III. (part of).  
CAUSES OF ALL DEATHS IN THE COUNTY AT DIFFERENT AGES.

Causes of Death.	Under 1 Year.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 65.	65 and upwards.	TOTAL.
Enteric Fever .. ..	..	1	..	2	1	1	5
Measles .. ..	7	24	14	..	1	..	46
Scarlet Fever .. ..	..	1	2	1	..	..	4
Whooping-Cough.. ..	17	15	..	..	..	..	32
Diphtheria (including Membranous Croup) ..	3	18	15	1	2	1	40
Influenza .. ..	6	5	3	4	30	26	74
Erysipelas.. ..	..	..	..	..	1	1	2
Phthisis .. ..	2	9	12	59	140	10	232
Tuberculous Meningitis ..	2	5	11	3	4	..	25
Other Tuberculous Diseases .. ..	2	6	9	8	15	1	41
Rheumatic Fever .. ..	..	2	6	5	12	..	25
Cancer .. ..	..	..	..	1	153	133	287
Meningitis.. ..	3	3	6	4	3	1	20
Bronchitis.. ..	36	16	2	..	24	116	194
Pneumonia .. ..	40	28	8	5	51	35	167
Other Diseases, Respira- tory Organs .. ..	1	6	3	4	11	12	37
*Diarrhoea and Enteritis	33	3	2	2	7	13	60
Appendicitis .. ..	..	..	4	4	4	1	13
Alcoholism .. ..	..	..	..	..	1	..	1
Cirrhosis of Liver .. ..	..	..	..	..	3	4	7
Nephritis .. ..	1	..	1	2	24	27	55
Puerperal Fever .. ..	..	..	..	..	8	..	8
Other Accidents .. ..	..	..	..	1	16	..	17
Congenital Debility .. ..	208	4	..	..	1	..	213
Violent Deaths .. ..	5	12	13	17	44	31	122
Suicides .. ..	..	..	..	..	8	2	10
Heart Diseases .. ..	..	1	1	5	109	194	310
Other Defined Diseases ..	98	15	25	23	253	632	1046
Diseases, ill-defined or unknown .. ..	..	..	..	..	11	1	12
	464	174	137	151	937	1242	3105

\* 25 deaths entered in this Table by the Registrar General under "Diarrhoea" are given in his Table for all causes of death in administrative areas under the heading "Other Defined Diseases" (see Ministry of Health Tables I. and III.).



1920.  
**MINISTRY OF HEALTH TABLES I. AND III.**

CAUSES OF DEATH IN EACH DISTRICT AT ALL AGES.

DISTRICT.	Population estimated by Registrar General for Birth and Death Rates.	Births.	Deaths.	Enteric Fever.	Measles.	Scarlet Fever.	Whooping-Cough.	Diphtheria and Croup.	Influenza.	Erysipelas.	Phthisis (Pulmonary Tuberculosis).	Tuberculous Meningitis.	Other Tuberculous Diseases.	Rheumatic Fever.	Cancer. Malignant Disease.	Meningitis.	Bronchitis.	Pneumonia. (All Forms.)	Other Diseases of Respiratory Organs.	Diarrhoea and Enteritis.	Appendicitis and Typhlitis.	Alcoholism.	Cirrhosis of Liver.	Nephritis and Bright's Disease.	Puerperal Fever.	Other Accidents & Diseases of Pregnancy and Parturition.	Congenital Debility & Malformation including Premature Birth.	Violent Deaths (excluding suicide).	Suicides.	Heart Diseases.	Other Defined Diseases.	Diseases ill-defined or unknown.	Total.					
URBAN.																																						
Alford .. ..	2297	44	24	..	..	..	..	..	..	..	2	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	1	1	..	5	13	..	24					
Barton-on-Humber ..	6604	185	90	..	4	..	1	..	5	..	12	2	3	..	6	..	6	10	3	1	1	..	..	..	..	1	3	..	..	7	24	1	90					
Brigg .. ..	3311	89	32	..	..	..	..	2	1	..	2	..	..	..	1	1	..	1	2	..	..	..	1	1	..	..	3	..	..	2	15	..	32					
Broughton .. ..	1655	42	13	..	..	..	..	..	..	..	1	..	..	..	..	..	1	1	1	..	..	..	..	2	..	1	..	..	..	1	5	..	13					
Cleethorpes .. ..	26696	745	300	1	1	..	4	6	2	..	31	2	4	7	21	1	28	19	1	4	1	..	..	4	1	..	18	7	1	40	95	1	300					
Crowle .. ..	3120	90	63	..	..	..	..	..	3	..	4	..	1	..	..	1	4	10	1	..	..	..	..	2	..	1	5	2	..	2	27	..	63					
Gainsborough .. ..	19971	524	244	..	13	..	1	4	2	1	27	3	6	2	21	1	18	21	2	11	3	..	1	6	..	..	7	7	1	18	67	1	244					
Horncastle .. ..	3423	70	59	..	1	..	..	..	..	..	5	1	..	2	4	1	2	7	..	2	..	..	..	1	..	..	..	1	..	8	24	..	59					
Louth (Borough) ..	9441	213	189	..	..	..	..	2	2	..	13	3	2	2	15	2	11	2	1	4	1	..	..	2	..	1	3	23	1	23	76	..	189					
Mablethorpe .. ..	1329	19	19	..	..	1	..	..	..	..	1	..	1	..	3	..	1	..	1	..	..	..	..	..	..	..	..	..	..	2	9	..	19					
Market Rasen .. ..	2134	37	23	1	..	..	..	..	..	..	1	..	1	..	5	..	..	..	..	..	..	..	..	1	..	..	2	1	..	3	8	..	23					
Roxby-cum-Risby ..	621	17	10	..	..	..	..	..	..	..	..	..	..	..	1	..	2	1	..	..	..	..	..	1	..	1	2	1	..	..	1	..	10					
Scunthorpe .. ..	29037	819	326	..	5	1	9	8	20	..	18	6	3	1	18	2	22	31	8	7	1	1	..	5	1	2	34	23	2	13	84	1	326					
Skegness .. ..	3390	82	45	..	..	..	..	..	1	..	5	..	..	..	9	..	..	3	1	..	1	..	..	..	1	..	2	..	..	4	18	..	45					
Winterton .. ..	1587	42	25	..	..	..	..	..	..	..	4	..	..	1	1	..	..	..	1	..	..	..	..	..	1	..	1	1	..	2	13	..	25					
Woodhall Spa .. ..	1479	27	16	..	..	..	..	..	..	..	..	..	..	..	4	1	1	..	1	..	..	..	..	..	..	..	1	..	..	2	6	..	16					
Total ..	116095	3045	1478	2	24	2	15	22	36	1	126	17	21	15	111	10	96	106	23	29	8	1	2	25	4	7	82	67	5	132	485	4	1478					
RURAL.																																						
Glanford Brigg .. ..	24503	630	301	..	1	..	5	4	9	..	16	1	2	1	36	2	22	16	2	..	..	..	..	8	..	3	25	13	1	29	105	..	301					
Caistor .. ..	10870	330	156	..	5	..	1	2	1	..	9	..	..	..	19	..	12	5	1	..	1	..	..	1	..	1	16	5	1	21	54	1	156					
Gainsborough .. ..	14362	328	162	..	3	..	1	5	9	..	10	..	2	2	13	1	11	7	1	..	..	..	..	6	..	..	7	6	..	18	58	2	162					
Grimsby .. ..	11191	314	123	..	2	1	5	1	6	..	7	..	2	..	12	..	6	2	1	2	2	..	..	1	1	..	13	4	..	9	46	..	123					
Horncastle .. ..	11605	279	119	..	1	..	..	..	2	1	8	2	..	1	19	..	14	6	1	1	..	..	..	1	..	1	9	4	..	16	32	..	119					
Isle of Axholme ..	5603	169	93	..	..	..	..	..	3	..	4	..	1	..	8	1	5	2	2	2	..	..	..	4	..	..	6	5	..	14	34	2	93					
Louth .. ..	18094	386	238	1	1	1	2	..	3	..	22	1	6	4	22	1	10	7	3	..	1	..	2	5	..	3	19	11	1	31	80	1	238					
Sibsey .. ..	3244	75	45	..	2	..	..	..	..	..	4	..	1	..	7	..	3	2	..	..	..	..	..	..	1	..	4	..	..	3	18	..	45					
Spilsby .. ..	20108	453	267	2	5	..	2	4	4	..	17	2	4	1	28	3	10	10	3	1	1	..	1	2	1	2	23	5	1	23	111	1	267					
Welton .. ..	11381	247	123	..	2	..	1	2	1	..	9	2	2	1	12	2	5	4	..	..	..	..	2	2	1	..	9	2	1	14	48	1	123					
Total ..	130961	3211	1627	3	22	2	17	18	38	1	106	8	20	10	176	10	98	61	14	6	5	..	5	30	4	10	131	55	5	178	586	8	1627					
Administrative County	247056	6256	3105	5	46	4	32	40	74	2	232	25	41	25	287	20	194	167	37	35	13	1	7	55	8	17	213	122	10	310	1071	12	3105					



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## VITAL STATISTICS OF THE ADMINISTRATIVE COUNTY.

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### AREA AND PHYSICAL FEATURES.

The administrative County of the Parts of Lindsey, the northernmost division of Lincolnshire, has an area of 963,800 acres of land and inland water. It is roughly an ob-long about 60 miles long from south-east to north-west and 40 miles broad from south-west to north-east. It is bounded on the north-east by the river Humber and the North Sea, and on the south-east by the Wash.

The boundary on the south-west is the river Witham between Boston and Lincoln and the Foss Dyke as far as Saxilby, after which it is an artificial one to the river Trent, which continues the boundary line to East Stockwith. On the north-west the Isle of Axholme is separated from Yorkshire by an artificial and extremely irregular line. There are two long lines of hills, one, which is called the Cliff, stretches between Winteringham on the Humber and Lincoln. It consists of oolite limestone, and has a fairly sharp escarpment rising 100 feet or more from the western plain. The Cliff on the right bank of the Trent at Alkborough consists of new red sandstone. The other range of hills called the Wolds stretches with varying breadth from Barton-on-Humber to Spilsby. These hills are of chalk, and reach an elevation of 548 feet just above Normanby. The wide valley between the two ranges of hills is low-lying, and is drained chiefly by the river Ancholme in the north, and by the Barlings River in the south. The land to the west of the Cliff is practically the valley of the Trent, that to the east of the Wolds is an alluvial plain called the Marsh.

### POPULATION, 1920.

The Registrar - General estimated the population of the county for the year 1920 at 247,056. The birth and death rates have been calculated on the basis of this estimate of the population. The estimated population of each of the Sanitary Districts is given in Table 1.

### DENSITY OF POPULATION.

The density of the population in the rural districts taken as a whole was .14 per acre, varying from .09 per acre in Caistor to .25 per acre in Grimsby. In the combined urban districts the density of population was 1.8 per acre, being



as low as .12 per acre in Roxby-cum-Risby, and as high as 22.5 per acre in Cleethorpes.

### **BIRTHS REGISTERED DURING 1920 and BIRTH RATE.**

During the year 6,256 births belonging to the county were registered, or 1,532 more than in 1919. There was an increase of 988 births in the urban districts, and of 544 in the rural districts. The county birth rate was 25.32 per 1,000 of the estimated population. That in the urban districts taken collectively was 26.22, and in the rural districts 24.51. The great increase in the birth rate is strikingly shown in the accompanying chart.

### **DEATHS and DEATH RATE.**

3,105 deaths occurred during the year of persons belonging to the county. This gives a death rate of 12.56 per thousand of the population.

In the urban districts there were 1,478 deaths with a rate of 12.73 per thousand, and in the rural districts 1,627 deaths, and the rate 12.42 per thousand. There were 241 fewer deaths in the rural districts, but 37 more in the urban districts than in 1919.

It is of interest to note from which diseases there was a definite decrease in mortality during 1920 as compared with the previous year, and from which there was an increased mortality both in urban and rural districts.

There were fewer deaths in both. From Influenza —227, Erysipelas —5, Bronchitis —43 (—40 rural deaths), Nephritis —17, Appendicitis —9, and Suicide —18.

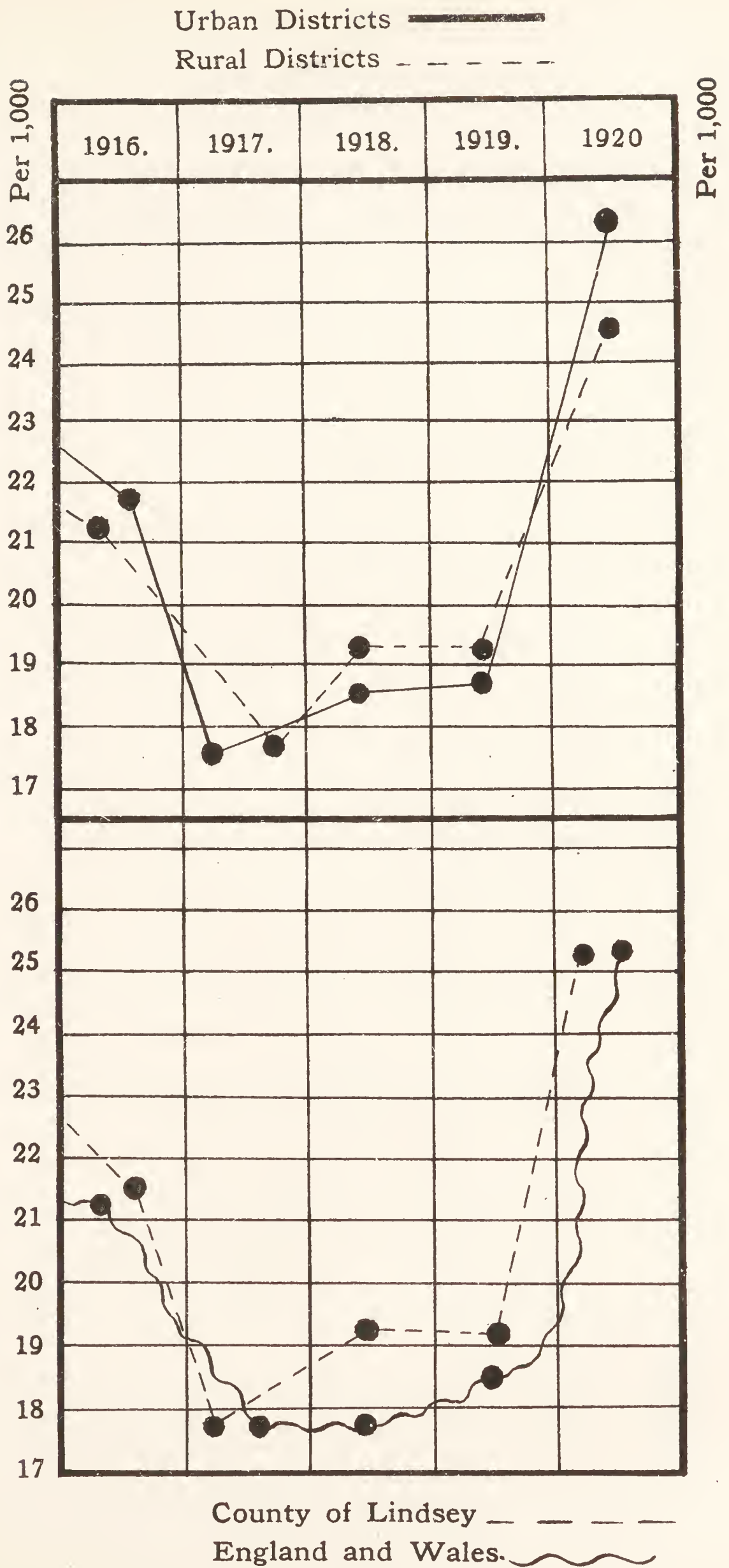
On the other hand there were more deaths in both from Enteric Fever +5, Measles +42, Whooping Cough +18, Phthisis +37 (+23 urban deaths), Rheumatic Fever +14, Meningitis +3, Puerperal Fever +3, other diseases of Pregnancy +9 (+7 rural deaths), Congenital Debility +57(+47 rural deaths), Heart Disease +83 (+77 urban deaths), Violent deaths +36 (+33 Urban deaths).

There was a decrease of 29 deaths from pneumonia in the rural districts, but an increase of 11 from the same cause in the urban districts.

In regard to Cancer there were 8 fewer deaths in the urban districts, but an increase of 8 from this disease in the rural districts.

There were 162 deaths from the seven chief Zymotic diseases as compared with 98 in 1919. Charts are given showing graphically the rate of mortality from various causes during the last ten years.

# BIRTH RATES FOR 5 YEARS.

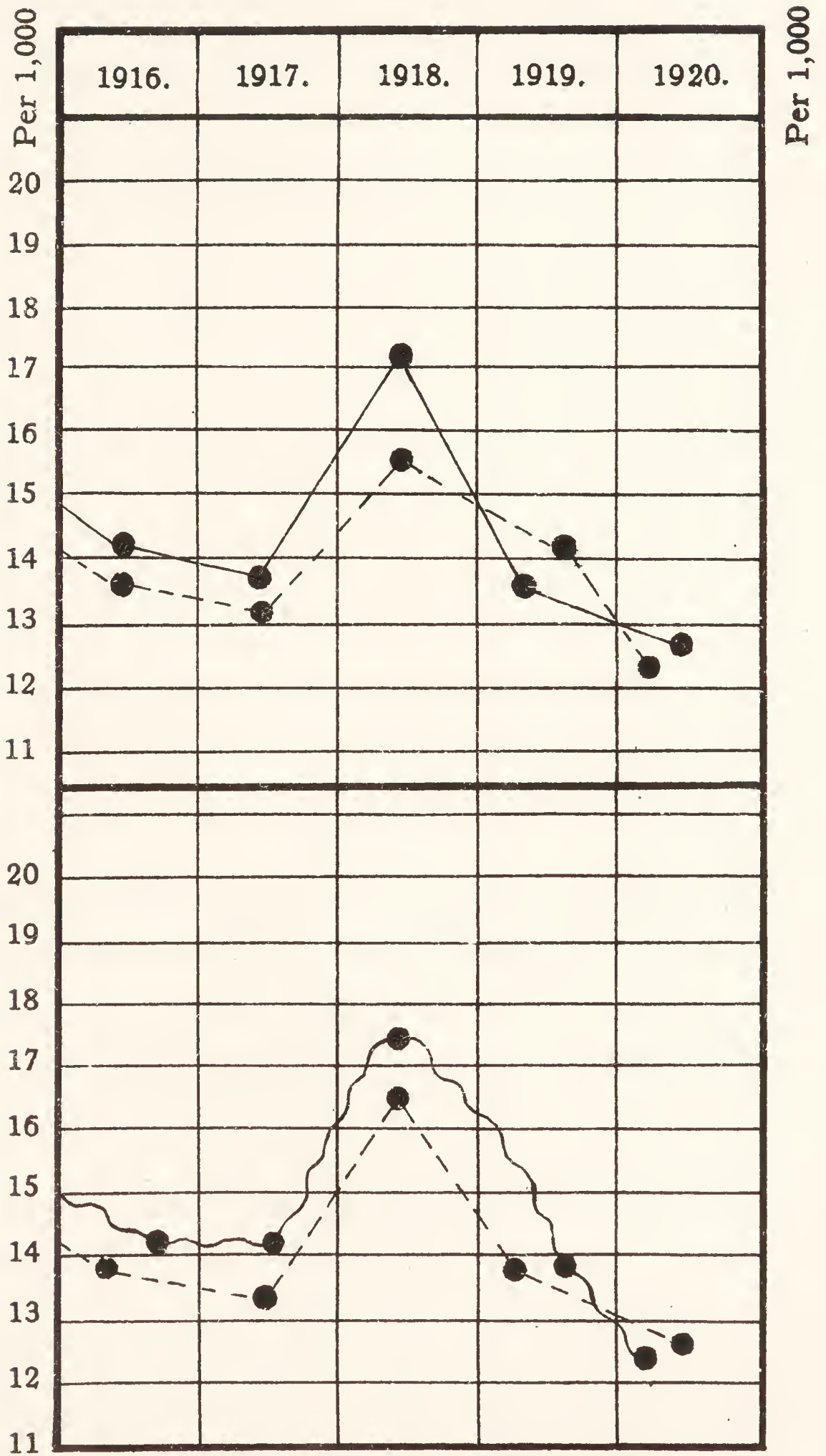






# DEATH RATES FOR 5 YEARS.

Urban Districts —————  
Rural Districts - - - - -



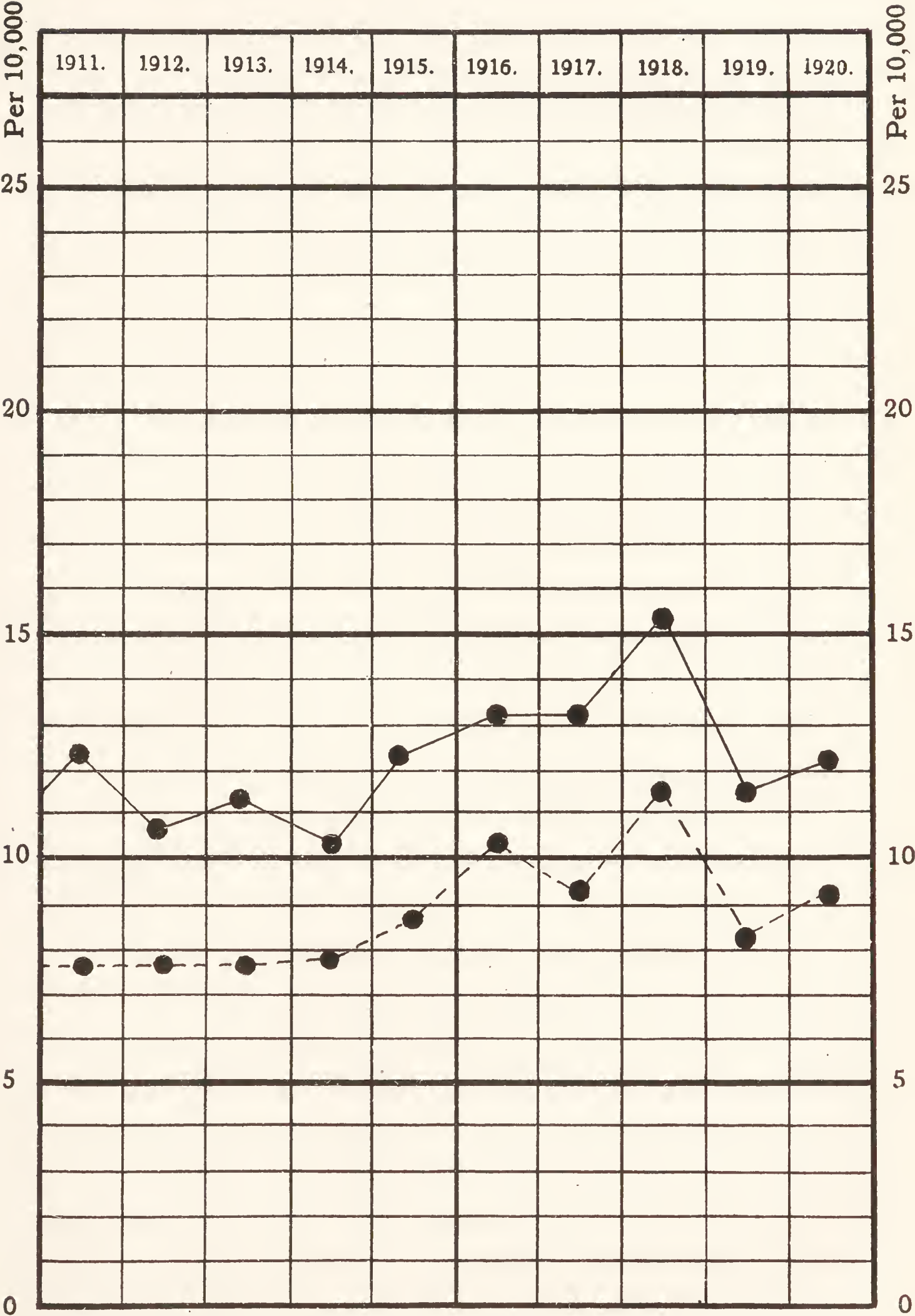
County of Lindsey — — — — —  
England and Wales. ~~~~~



Chart showing Death Rates per 10,000 from Tuberculous Diseases in the County during 10 years, 1911- 20.

Total Tuberculous Diseases thus

Phthisis - - - - -



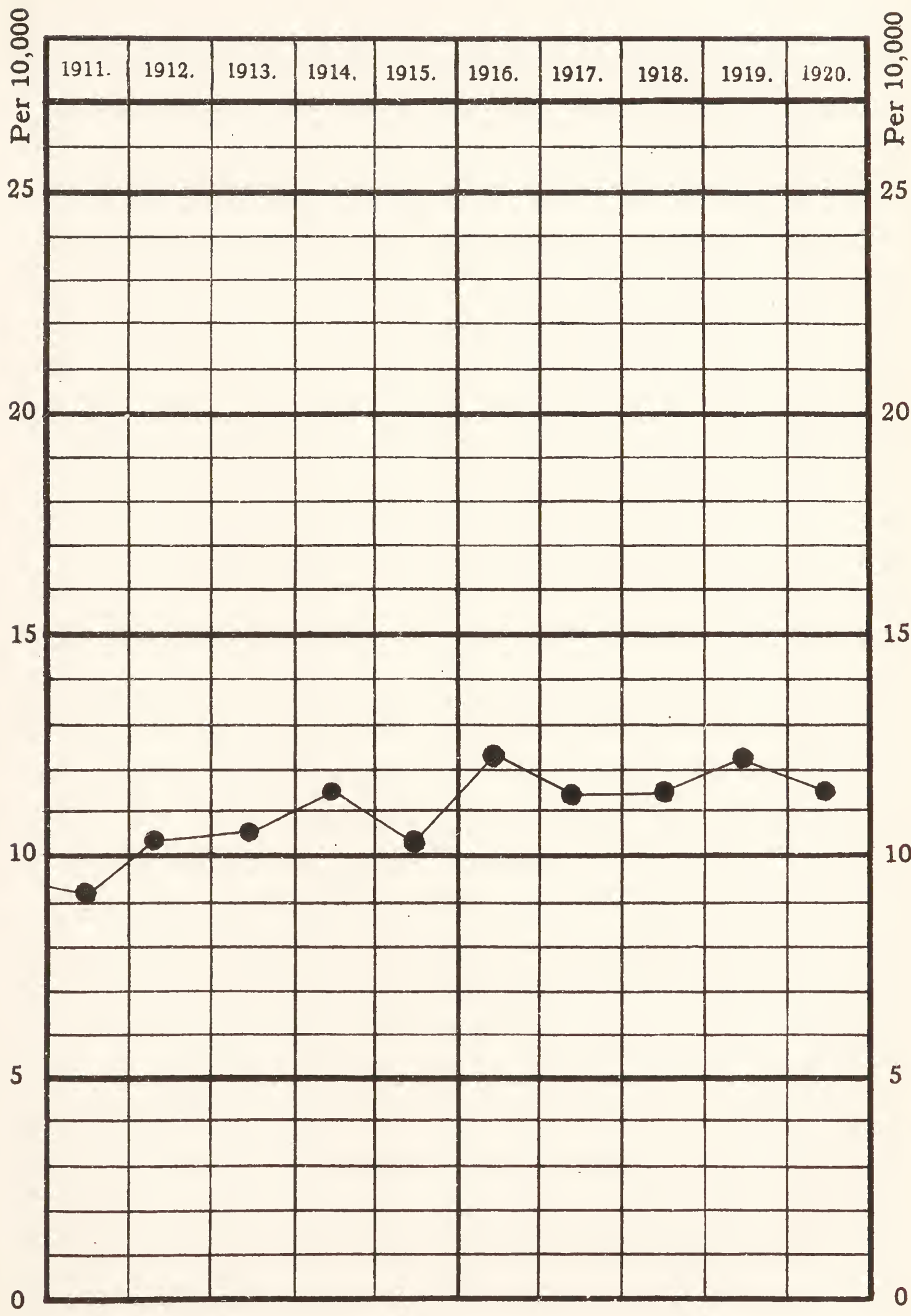
Phthisis Rate .... 8.2

Total Tuberculous Diseases .... 11.5





Chart showing Death Rate per 10,000 from Cancer  
in the County during 10 years. 1911-20.

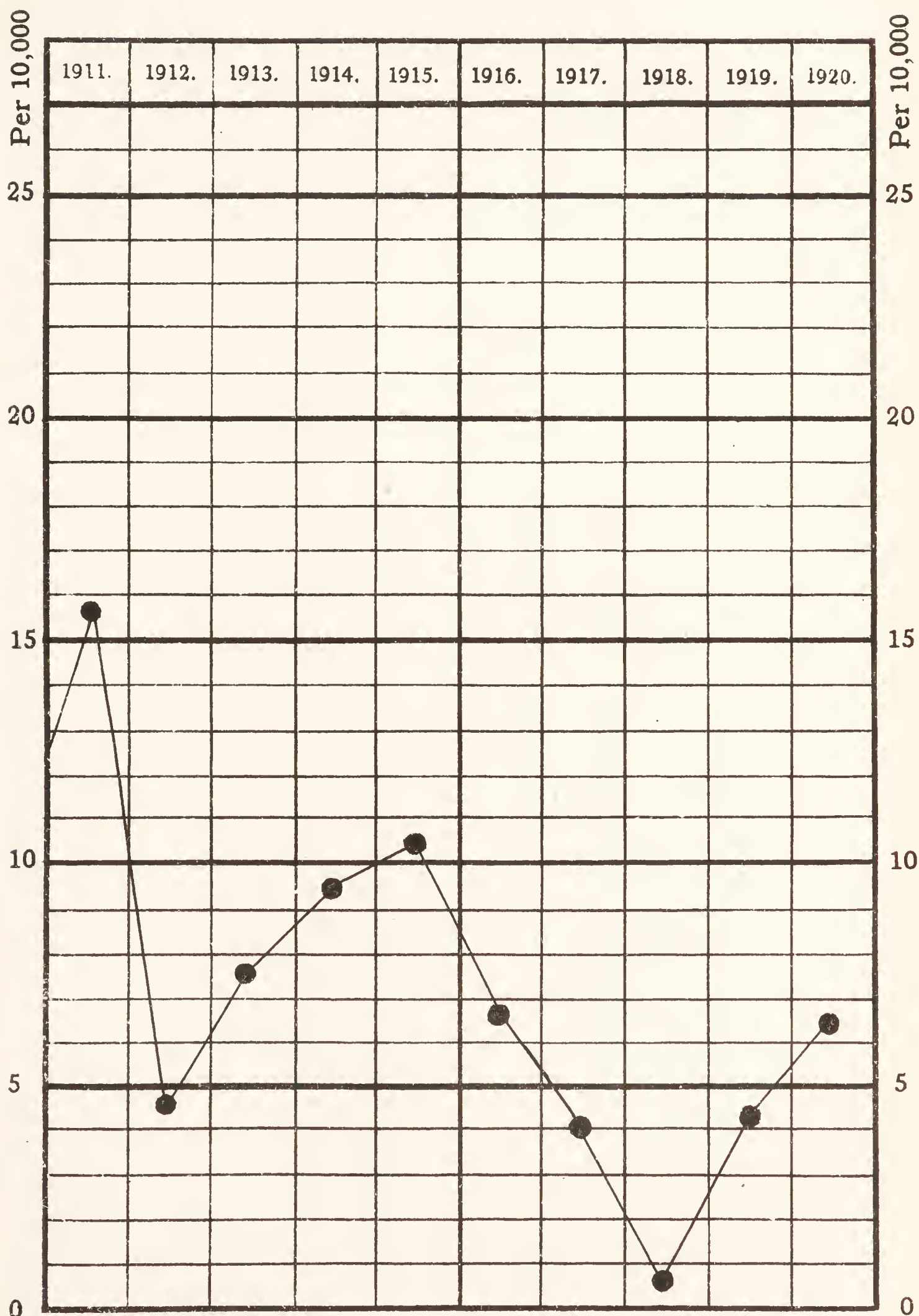


Death Rate .... 12.0





Chart showing Death Rates per 10,000 from Zymotic Diseases in the County during 10 years, 1911-20.



Death Rate .... 4.1



## INFANT MORTALITY.

In spite of an increase in the number of deaths from congenital debility or weakness at time of birth, and an increase of 54 in the total number of deaths under one year of age as compared with 1919, the mortality amongst the 6,256 infants born was only 74·16 per 1,000, whereas with 4,724 births in 1919 the mortality rate was 86·79.

The rate of infant mortality in the last ten years is given below :—

Year.	Infant Mortality Rate.	Year.	Infant Mortality Rate.
1911	119·78	1916	82·44
1912	88·5	1917	81·65
1913	100·84	1918	95·75
1914	88·85	1919	86·79
1915	96·71	1920	74·16

The measures required in a complete scheme for Maternity and Child Welfare were detailed in my reports for 1918 and 1919, and need not therefore be set out again this year. The County Council's scheme includes the instruction of mothers by Health Visitors who visit the home on the birth of a child after the doctor or midwife has ceased to attend, and ascertain whether the conditions are satisfactory or the reverse. All unsatisfactory conditions, whether in regard to the home, the parents or the infant are reported, and under medical supervision efforts are made to improve them. Infant Welfare Centres have been established in all the principal towns of the County, and in several of the larger villages, where mothers attend for general instruction and advice, and bring their infants to be weighed. Medical consultations are held, and simple treatment for minor ailments given. For any definite illness in mothers or infants the patients are immediately referred to their own doctors. Dried Milk has been supplied at less than cost price in necessitous cases, and in a few cases assistance has been given towards the provision of a home help where one could not otherwise be obtained. This was found to be very necessary when the mother was seriously ill after confinement, and no neighbour or friend was available to keep the house work going and attend to the children. An effort has been made to improve the midwifery service by offering grants to District Nursing Associations to enable them to provide nurses capable of acting at Midwives. Dr. Annie T. Brunyate has reported in detail upon the Maternity and Child Welfare work carried out in 1920. Her report is submitted as follows:—

## MATERNITY AND CHILD WELFARE IN 1920.

### Home Visiting by Health Visitors.

The number of births notified in the County in 1920 was **5,181**, the total number registered was **6,256**. There was thus failure to notify in 1,075 cases, or 17·1 per cent. as compared with 22·3 per cent. in the preceding year. The number of houses visited was 6,043, the number of infants seen and reported on was **5,461**, the number of children in the 2nd year of life 3,670, the number between 2 and 5 years of age 3,801.

The following table shews the whole number of home visits paid by the Health Visitors during the year :—

				Whole time Health Visitors.	Part time Health Visitors.	Total.
EXPECTANT MOTHERS.						
1st Visits	..	..	..	119	603	722
Other Visits	..	..	..	233	1307	1540
1st Visits to Babies	..	..	..	5395	648	6043
Re-visits to Babies	..	..	..	7720	3022	10742
Visits to Children from 1 to 5 years of age	..	..	..	8896	1882	10778
						<hr/> 29825 <hr/>

The unsatisfactory conditions found present at first visits were classified as in preceding years under three headings according as they were referable to the house, the family or the baby ; they are given below in tabular form :—

### UNSATISFACTORY CONDITIONS.

HOME. 6043 houses visited.

			Per cent.				Per cent.
Not clean	..	265	4·38	No refuse recep-			
*Dirty	..	75	1·24	tacle, urban dist.	42		0·70
Fairly well aired	164	2·71		*Refuse nr. house	12		0·20
*Not well aired	40	0·66		4 persons sleeping			
Unsatisfactory				in one bedroom	508		8·41
storage of milk	231	3·82		*Overcrowding	166		2·76
Dampness slight	221	1·87		*Other insanitary			
*Dampness	..	214	3·54	conditions	..	259	4·29
*Ill repair	..	233	3·87				

Reports were made to the local Medical Officers of Health on all the insanitary conditions marked with an asterick (\*) on the above list.



		No. reported on.	Health fair only.	Bad.
PARENTS.	Father..	5496	190	54
	Mother	5798	522	75
INFANTS. Total number seen <b>5461.</b>				
Dirty .. ..	39	0·71	Abnormal con-	
Sleeping with			dition of umbilicus	248 4·54
mother, no cot	3488	63·87	do. of Eyes	104 1·90
Using comforter	2281	41·77	do. of Mouth	118 2·11
Not taken out			Premature infants	255 4·67
of doors ..	482	8·83	Artificially fed	1256 23·00
Unsatisfactory			Mixed feeding	428 7·82
form of bottle	86	1·57		

12 cases of neglect were referred to the National Society for the Prevention of Cruelty to Children.

The percentage incidence of almost all the unsatisfactory conditions of infants is lower than for last year, and it is satisfactory that in a good many cases the improvement appears to have resulted from advice given by a Health Visitor in previous visits to an earlier child. The figures with regard to breast feeding are disappointing. Out of the **5,461** infants seen, **3777**, or **69·18** per cent. only, were altogether breast fed at the time of the first visit of the Health Visitor, and **428** or **7·82** per cent. were partly breast fed. **1,256**, or **23·00** per cent., were already being artificially fed. It is one of the most unfortunate effects of the failure to notify a birth that the first visit of the Health Visitor can often only be paid when artificial feeding has already been begun.

Towards the end of last year a change was made in the method of dealing with the reports made by the Health Visitors. The rule now is that each first report is seen by me at the office and commented on as may be necessary, and that later Dr. Orkney or I go through the reports personally with the Health Visitors. The plan is found to answer well; the personal interest taken in their work is an encouragement to the Nurses, and we are able to help them in some of the difficulties which arise in their work.

## MILK.

Dried milk has again been supplied by the County Council for sale at cost price, or below cost price in necessitous cases, for the use of infants, children under 5, and for nursing and expectant mothers. The milk has been sold at all the Infant Welfare Centres, and by Voluntary workers at different villages out of reach of Centres. In September arrangements were made by which fresh milk could also be supplied.

The following figures shew the expenditure on milk for the financial year ending March 31st, 1921 :—

#### DRIED MILK.

Total cost of dried milk sent to Centres or to village distributors .. .. .	£4898
Total amount received for milk sold at the Centres or through village distributors .. ..	£4374
Total loss on dried milk .. .. .	£524
	(10·6%9)

#### FRESH MILK.

£60 has been expended on fresh milk supplied at the Centres or through village distributors. In addition **£150** was spent by the Gainsborough Town Council on the distribution of fresh milk during the acute unemployment which resulted from the moulders' strike, and responsibility for the expenditure was later taken over by the County Council at the request of the Ministry of Health.

#### DEFINITION OF NECESSITOUS CASES.

At the meeting of the Maternity and Child Welfare Committee held in November, 1919, a necessitous case to which milk could be supplied at less than cost price was defined as being one in which the family income fell below 7/6 per head after the payment of rent and rates. Up to this time the limit had been 5/- per head.

It was obviously necessary that special circumstances should be taken into consideration in deciding in any particular case whether the milk should be allowed free or at quarter or at half price. Apart from special circumstances a standard which was coming to be generally accepted by the end of the year was that :—

Milk should be allowed free if the income after deduction of rent and rates fell below 3/- to 3/6 per head.

Milk should be allowed at quarter price if the income after the deduction of rent and rates was between 3/- (to 3/6) and 5/- per head.

Milk should be allowed at half price if the income after deduction of rent and rates was between 5/- and 7/6 per head.

The raising of the upper limit of income from 5/- to 7/6 in the definition of a necessitous case has caused an increase in the amount of milk supplied at below cost price, but has not done so to the extent which was expected. In a majority of cases in which the mother is asked to contribute half the cost

of the milk, she soon ceases to apply for it, and prefers to buy condensed milk, which is altogether unsuitable for the child's continued use, but is more convenient for general family use, and can be obtained at any time without the trouble of attendance at the Centre on a fixed day ; only the more thrifty women recognise the value of the half-price milk.

#### FRESH OR DRIED MILK.

When milk is given at below cost price, dried milk is preferable to fresh milk from the point of view of economy. It is found to be impossible to graduate the charge for fresh milk in accordance with the income as is done when dried milk is supplied, because the collection in advance of the woman's weekly contribution and the arranging with the dairyman for the supply of milk, and for its immediate discontinuance if the weekly contribution is not forthcoming, throw more work on the voluntary workers than can be done by them in addition to what they already do at the Centres. The result is that fresh milk is given free at a higher income limit than is the case with dried milk.

In favour of dried milk are also the facts that it can always be obtained, while good fresh milk is often very scarce, and may be actually unobtainable, that its storage is less difficult than that of fresh milk, and that even under unfavourable conditions there is no danger of its going bad between one visit of the mother to the Centre and another. A further great advantage of dried milk when given away, is that the taste is not as a rule much liked by adults, and consequently it is much more likely to be reserved for the use of the infants, young children and mothers for whom it is intended.

On the whole, therefore, although there are undoubtedly a few special cases in which fresh milk must be ordered, dried milk appears to be more suitable than fresh for necessitous cases.

#### DISTRIBUTION AT THE DIFFERENT CENTRES.

At the Immingham, Ulceby and Ashby Centres no milk was given at a reduced price during the year. At Scunthorpe only two cases had milk at below cost price, and one of these was not really a Scunthorpe case, as the woman came in a long distance from the country.

Brigg, Saxilby, Keelby, Skegness and Spilsby had 14 cases altogether. One of these 14 cases is a good example of the value of the milk. The child for whom the milk was obtained was illegitimate and lived with his mother and her husband,



who was not his father ; the child suffered from tuberculous peritonitis, and received milk free until he was sent to the Hull Children's Hospital ; on his return in improved health the milk was continued at half price ; the family income was 5/- per head after deduction of rent and rates.

#### ANALYSIS OF CASES AT ONE OF THE LARGER CENTRES.

An analysis of the cases at one of the large Centres also brings out clearly the way in which the supply of free milk at reduced prices meets real and urgent need.

##### FREE DRIED MILK.

Of 15 cases to whom dried milk was granted free during 1920 the average income was 2/7 a week after deduction of rent and rates.

In 2 of the 15 cases the income at the time of application was nil, because out of work pay had not yet been received, and in neither case was the milk allowed free for the full period of the month in order that the case should come up for reconsideration when out of work pay was received.

In a third case the husband and wife were living, while out of work, with the husband's mother, and no rent was paid ; in this case enquiries were made to ascertain that the mother-in-law was not in a position to support the family. Another of the women suffered from chronic heart disease and extreme anaemia, and had 4 children under 5 years of age, all suffering from rickets ; the income was 2/4 a head after deduction of the rent, but in this calculation no allowance was made for the cost of free dinners which were being supplied to the woman and three of the children. In another of the 15 cases the mother, who was a widow, the father having died from phthisis, had a total income of 9/- a week after deduction of rent, on which to support herself and her child who was suffering from rickets.

In addition among the parents of the 15 cases were two mothers and two fathers suffering from phthisis.

##### FRESH MILK.

Four cases with an average income of 2/5 per head received free milk free of charge.

##### MILK AT REDUCED PRICES.

Three cases received milk at quarter price, the average income at the time of making the application being 4/8 per head.



19 cases with an average income of 5/2 received milk at half price. In three of them the income of the parent was nil at the time of application. In one of these the mother was unmarried and lived with her father, who was in work ; as her father received the benefit of her services it seemed right that he should contribute to the price of the milk, though the woman had no income of her own, but after the first visit she never returned for the milk. In the second case the husband was in hospital, and would shortly receive sick pay. In the third case the husband was about to go to a Sanatorium and at the time of application had only been out of work one week, so that there was still an income from the work ; this case was transferred to the free list after one week. If these three cases be excluded the average income of the 19 cases in which milk was supplied at half price works out at 6/1 per head.

Considering all the cases together in view of the fact that the right feeding of a child in the first year of life is of more importance in respect of future health than that in any other year, it is clear that the power to grant milk in necessitous cases is most valuable in the interests of the child.

### **INFANT WELFARE CENTRES.**

Four new Centres have been opened during the year—Winteringham, Ashby, Saxilby and Kirton Lindsey.

At Ashby the Centre was intended to lessen the congestion at the Scunthorpe Centre, where the premises are altogether too small for the number of mothers and children in attendance. The Winteringham mothers were anxious to have a Centre for, though several of them from time to time attended the Scunthorpe Centre, the distance was great, and the travelling facilities were very poor. A considerable number of Saxilby mothers were in the habit of going when possible to the Lincoln Centre, but the train journey in the winter or in bad weather was undesirable for young babies and delicate children, and often it was impossible for them to take just those children who most needed attention. Kirton Lindsey is one of the largest villages which had been left without a Centre.

There are now 17 Centres in the County in addition to the one at Little Coates, which is shared with Grimsby. Whenever premises can be obtained another Centre is needed in the Scunthorpe and Frodingham Urban District. The infant mortality of this district is high. It is certain that more mothers would attend the present Infant Welfare Centre there if it were less crowded.

The arrangements for medical attendance at the older Centres remain almost the same as last year. At Gainsboro' a Doctor now only attends the meetings of the Infant Welfare Centre on three Wednesday afternoons out of four. On the fourth Wednesday she is present at Gainsborough in the morning to see any sick babies who are in need of medical supervision, and in the afternoon at Saxilby at the meeting of the Centre there. A Doctor is present once a fortnight at the meeting of each of the Winteringham and Ashby Centres. Dr. Sharpley, of Kirton Lindsey, has most kindly consented to act as Honorary Medical Officer to the Kirton Lindsey Centre, which meets once a fortnight.

As more Centres are opened it is intended that a doctor should visit each of the larger village Centres on a fixed day once a month only, but that she should arrange to see at other times, as may be necessary, any special children who are not thriving.

As was the case last year the Infant Welfare Centres have also acted as ante-natal clinics, except at Scunthorpe. Here a special ante-natal clinic was opened last October and meets once a fortnight in the morning; the attendance has been small up to the end of the year, and it is recognised to be a matter of considerable difficulty to carry on a successful ante-natal clinic except in conjunction with a maternity home.

During the coming year it is hoped to arrange that village Centres shall be used also as School Clinics, the School Clinic to be held in each case from half to three-quarters of an hour before the opening of the Centre.

The number in attendance at the different Centres during the year has been:—

2153 mothers, 1542 infants, 1000 children.

These numbers compare favourably with those of 1919, when 1441 mothers, 1104 infants and 621 children attended the Clinics.

1,946 infants and children made a total number of 4,906 visits to the Clinic Doctors.

This number of infants and children seen by the Doctors is made up as follows:—

New Cases.	Boys.	Girls.	Total
Infants .. .. .	594	544	1138
Children 1—2 years .. .. .	62	64	126
Children 2—5 years .. .. .	120	129	249
			<hr/> 1513 <hr/>

Referred cases, *i.e.*, cases which had already attended the Clinic in the preceding year or years:—

	Boys.	Girls.	Total.
Infants .. .. .	66	77	143
Children 1—2 years .. .. .	68	53	121
Children 2—5 years .. .. .	83	76	169
Total Referred Cases.. .. .			433
New Cases .. .. .			1513
Grand Total .. .. .			1946

457 mothers were seen on account of their own health apart from those seen as ante-natal cases, and those seen on account of their teeth.

The rule at all Centres is for each infant to be shewn to the Clinic Doctor at least once in every two months, even though the child is in good health. In some Centres there is no difficulty in carrying out this rule and in some the mothers like their children to be seen by the Doctor at each visit. At one or two of the Centres, however, the mothers are not very willing to bring their children unless they are in some way ailing, and at the larger Centres where sick babies and new babies must come before apparently healthy ones who have previously seen the Doctor, it is impossible for all the mothers of healthy children to wait until their turn comes to be interviewed by the Doctor. The mothers at all the Centres are eager for advice if a child appears to be ailing or not gaining weight satisfactorily.

During the last three months of the year the total average attendance at the Centres has been—

Infants .. ..	459·5
Children .. ..	256·2
Total .. ..	716·7

The total average number seen by the Clinic Doctors has been—

Infants .. ..	138·4
Children .. ..	78·8
Total .. ..	217·2



In addition, roughly a quarter as many mothers as infants and children would be seen for their own health at each Clinic.

The following table shews the ages at which 1,133 of the infants of under one year of age made their first visit to the Clinic Doctors :—

Weeks 4 to							
Weeks 2	Weeks 2-3	Weeks 3-4	Months 2	Months 2-3	Months 3-4	Months 4-5	Months <sub>s</sub> 5-6
2	7	56	349	227	127	112	68
<hr/>							
Months 6-7	Months 7-8	Months 8-9	Months 9-10	Months 10-11	Months 11-12		
57	34	35	20	18	21		

*i.e.*, 641 or 56·5 per cent. were under three months of age at their first visit as compared with 49·2 per cent. last year.

### Artificial Feeding.

Out of 1,054 infants under 9 months of age brought to see the Clinic Doctors, 501 or 47·5 per cent. were breast fed at their first visit, 439 or 41·6 per cent. were artificially fed, and 114 or 10·6 per cent. were on mixed feeding. This shews an advance on last year, when only 40·57 per cent. were breast fed at their first visit. Unfortunately a large number of the mothers still make their first visit to the Clinic because the baby is suffering from digestive disturbances due to artificial feeding, when it is already too late to return to breast feeding.

The advantages of breast feeding as compared with any form of artificial feeding are reflected in the figures as to the weights of the children. Out of 424 breast fed babies 350, or 82·5 per cent., were of average or over-average weight on their first visit. 74 or 17·4 per cent. were below average weight. Out of 404 artificially fed children 230, or 56·9 per cent., were of average or over-average weight. 174 or 43·0 per cent. were below average weight.

### Health of Infants at First Visit.

If minor gastro-intestinal disorders be included, at least about 70 per cent. of the 1,513 children were found to be suffering from some disease or defect on their first visit to the Clinic Doctor. These diseases or defects are shown in the following table :—



Chronic Rhinitis and Nasal					EYES.		
Obstruction .. .. .	8				Blepharitis .. .. .	9	
Adenoids .. .. .	8				Conjunctivitis .. .. .	12	
Enlarged Tonsils & Adenoids	9				Blepharitis and Conjunc-		
Enlarged Tonsils .. .. .	3				tivitis .. .. .	2	
Tonsillitis .. .. .	3				Ophthalmia Neonatorum	11	
Cough—Pharyngeal .. ..	73				Squints .. .. .	10	
Catarrhal Laryngitis .. ..	2				Nystagmus .. .. .	1	
Bronchitis .. .. .	46				Keratitis .. .. .	1	
Asthma .. .. .	1				Corneal Ulcer .. .. .	2	
Pleurisy .. .. .	2				Perforated Corneal Ulcer	1	
Phthisis .. .. .	2				Stye .. .. .	1	
Abdominal Tuberculosis ..	2				Skin Diseases .. .. .	186	
Tuberculous Sinus .. ..	1				Oral Diseases .. .. .	33	
Adenitis (Tuberculous) ..	14				Mental Deficiency .. ..	10	
„ (Tuberculous) .. ..	8				Hydrocephalus .. .. .	1	
„ (Non-tuberculous) ..	24				Convulsions .. .. .	8	
Pre-tuberculous .. .. .	5				Epilepsy .. .. .	2	
(Older Children)					Congenital Laryngeal Stridor	4	
Debility, loss of appetite ..	31				Masturbation .. .. .	1	
(Older Children)					Nervous Habits .. .. .	1	
Marasmus & poor nutrition	29				Facial Paralysis .. .. .	1	
Gastro Intestinal disorders..	477				Bad Sleeping .. .. .	2	
Intussusception .. .. .	1				Tetany .. .. .	1	
Prolapsus ani .. .. .	3				Cerebral Diplegia .. ..	1	
Intestinal Parasites .. ..	5				Fracture of Humerus .. ..	1	
Intestinal Haemorrhage .. ..	2				Infectious Diseases .. ..	14	
Jaundice .. .. .	6				Supernumerary Digits .. ..	1	
Rickets .. .. .	54				„ Auricle .. .. .	1	
Congenital Syphilis .. ..	11				Hammer Toe .. .. .	1	
(Clinical signs of)					Talipes .. .. .	1	
Umbilical Hernia .. ..	127				Undescended Testicle .. ..	1	
Ventral Hernia .. .. .	3				Hypospadias .. .. .	1	
Inguinal Hernia .. .. .	25				Haematoma of Sterno Mas-		
Omphalitis .. .. .	22				toid .. .. .	1	
Phimosis .. .. .	145				Torticollis .. .. .	1	
Hydrocele .. .. .	1				Cleft Palate .. .. .	1	
EARS.					Tongue Tie .. .. .	4	
Otorrhoea .. .. .	36				Onychia .. .. .	1	
Mastoid Abscess .. .. .	1				Paronychia .. .. .	2	
Defective Hearing .. .. .	1						
Deaf and Dumb .. .. .	2						

The ailments from which the children suffered at their first visits were again this year chiefly minor ones. A very large number being minor gastro-intestinal disorders. Treatment has been on the lines described in last year's report, and is for the most part of the simplest possible character. Apart from this, mothers are always advised to get medical advice for the children outside the clinics.

### Village Centres.

The average of health of the children attending village centres varies greatly in different villages, often without any very obvious cause. Our experience is that it certainly can-

not be assumed without further investigation, that village children must as a whole be healthy and in need of no special care. For example, at one of our village Centres, amongst 43 infants and children, the following defects were found to be present :—

- 3 cases of Rickets.
- 1 Umbilical Hernia needing operation.
- 2 Adenoids, one of which needed operation.
- 1 Nævus, needing operation.
- 1 Squint case, for which glasses were provided.
- 1 case of Nystagmus to be tested for glasses.
- 1 case of Blepharitis.
- 1 case of Corneal Ulcer.
- 1 case of Keratitis.
- 2 cases of poor nutrition, one of which later developed otorrhoea.
- 1 case of Otorrhoea in addition to the above.
- 1 Deaf and Dumb child.
- 1 case of marked hydrocephalus.
- 1 case of enlarged glands, probably tuberculous in character, and otorrhoea.
- 1 case of debility following measles.
- 1 child just out of hospital after operation for pleuritic effusion.

In another village a large number of the children were brought up on Condensed milk, which may to some extent account for a marked tendency to delicacy and malnutrition.

### Health Talks.

Unless the Nurse has a special syllabus of her own the pamphlets supplied as a basis for the lectures have been "Wives and Mothers," published by the National League for Physical Education and Improvement, the pamphlet on the Feed and Care of Infants specially prepared for distribution by the Lindsey Health Visitors, and a specially prepared syllabus of lectures on Hygiene.

Several of the Health Visitors take a great interest in the talks to mothers, which they have given at the Centres, and have spent much care and thought on their preparation.

### Clothing.

The clothing of the children has slightly improved, there being fewer babies dressed in cotton garments only. Much, however, remains to be done before it can be considered satisfactory.

## Health of Mothers.

The following table shews the diseases and physical defects from which the 457 mothers seen for their own health were suffering. Diseases of the breast and ante-natal cases are not included :—

Anæmia Slight .. .. .	53	Osteo Arthritis .. .. .	1
Anæmia .. .. .	108	Chronic Rheumatism .. .. .	11
Anæmia & Constipation .. .. .	87	Synovitis of Knee .. .. .	1
Constipation .. .. .	71	Chorea .. .. .	1
Hæmorrhoids .. .. .	28	Neuritis .. .. .	3
Indigestion .. .. .	13	Neuralgia .. .. .	8
Intestinal Parasites .. .. .	1	Neurasthenia .. .. .	1
Stomatitis .. .. .	1	Facial Paralysis .. .. .	1
Bronchitis .. .. .	18	Epilepsy .. .. .	1
Asthma .. .. .	2	Mental Deficiency .. .. .	4
Phthisis .. .. .	10	Headaches .. .. .	8
Hip Disease, Tuberculous, old	3	Headaches and Defective	
Tuberculous Sinus .. .. .	4	Vision .. .. .	3
Adenitis Tuberculous .. .. .	2	Blepharitis .. .. .	5
Adenitis, non-tuberculous	2	Iritis .. .. .	1
Goitre .. .. .	9	Meibomian Cyst .. .. .	1
Diseases of Genito Urinary		Nævus .. .. .	1
System .. .. .	37	Eczema .. .. .	2
Varicose Veins .. .. .	4	Occupational Dermatitis .. .. .	1
Varicose Ulcers .. .. .	1	Psoriasis .. .. .	1
Phlebitis .. .. .	3	Urticaria .. .. .	1
Chronic Rhinitis .. .. .	5	Furunculosis.. .. .	1
Otitis Media .. .. .	2	Paronychia .. .. .	1
Otosclerosis .. .. .	1	Addison's Disease .. .. .	1
Defective Hearing .. .. .	8	Bright's Disease .. .. .	1
Deaf and Dumb .. .. .	2	Heart Disease .. .. .	4
Hare Lip .. .. .	1	Pharyngitis .. .. .	1
Inflammation of Patella		Tonsillitis .. .. .	1
Bursa.. .. .	2	Carious Teeth .. .. .	298

As a rule, conditions such as anaemia, debility and constipation only, were treated at the clinics. For other diseases or defects the mothers were advised to obtain medical advice outside the clinic.

The above list does not give a complete picture of the diseases or physical defects among all the mothers—nearly 2,000 in number—who have been interviewed by the Clinic Doctors during the year. One reason for this is that mothers who come primarily on behalf of their children cannot be medically inspected in the routine manner of a school medical inspection. In addition, notes as to the mother's own health have been more systematically entered as the year has gone on. Then, too, notes as to the state of the teeth have been made as a matter of routine only since the dental treatment for the mothers has become organised, and even then, at first merely in the case of the new mothers. Our usual rule in new cases is to observe the presence of anaemia or general



debility, to enquire as to constipation, inspect the teeth and to make a general enquiry as to the mother's health. The first three points are chosen for enquiry because we are in a position to do something to remedy any defects in respect of them which may be found to exist. If, however, the mother's health is satisfactory with regard to these three points, and she herself makes no complaint, she is assumed to be in good health, and the case is not entered as one in which the mother is seen for her own health. The fact that dental treatment can be offered, and that we have at our disposal a few simple drugs is of the greatest help in dealing with the mothers. They need to be educated as to the necessity of treatment of conditions such as anaemia and debility, which do not prevent them from "getting about" their work, but which may make a high standard of work in the home almost impossible to maintain. With regard to teeth, not only is the cost of efficient dental treatment, apart from the County Council scheme, often prohibitive, but the supply of skilled dentists is totally inadequate. The opening of Dental Thrift Clubs at the Centres by Voluntary Committees, in order that mothers may pay for artificial teeth in advance by small weekly sums, has been most helpful. Unfortunately, the prevailing unemployment at the end of the year has interfered to some extent with the success of the Clubs, and some mothers have had to postpone dental treatment, but it was felt to be better to let them do this rather than to endanger the whole plan of payment by the mothers themselves, as would happen if artificial teeth were provided free of cost in cases of temporary poverty due to unemployment.

In some cases what the mother most needs is a rest, and the provision of a Home Help for a short period may, in suitable cases, effect more than any treatment by medicines. The Children's Care Committees have done most useful work during the year in providing Home Helps for urgent cases, in supervising the work of the Home Helps, and in paying for them, in part or in whole, where necessary.

In conjunction with the list of diseases of mothers, may be taken the following table, which shews for **354** infants of under nine months of age, the reasons given by the mothers for weaning the children.

Milk not satisfying, not agreeing, or loss of weight.	Failure of milk at under one month.	No milk.	Failure of milk later.	Doctor's orders or illness of mother.	Advice of Nurse.	Diseases, Abnormalities of the mother's breast.
26	64	16	28	59	2	17



Prematurity of child.	Illegiti- mate child.	Children adopted.	Mother working.	Twins.	Mother refused to try.	Baby said to refuse.
3	7	7	4	18	2	1

The largest group is seen to be that in which the milk failed during the first month, the failure beginning as a rule when the mother got up after the confinement. The reasons given after the event must be accepted as only roughly accurate, but when every deduction has been made for unwillingness on the part of the mother to feed her child or for lack of skilled advice at the time of weaning, the large group of 80 cases (31·4 per cent.) in which the mothers had no milk, or the milk failed in the first month, and the group of 58 cases (23·2 per cent.) in which weaning was by order of the Doctor or consequent upon illness of the mother taken together, prove undoubtedly that very many mothers are prevented from breast feeding their children by poorness of health.

The figures for infant mortality in the County during the year are also available to shew the need for care of the health of the mothers in the interests of the children. 475 of these children have been classified under age groups according to the cause of death.

281 out of the 475 children died at under one month, and of these :—

124 (44·1 per cent) were premature.

5 (1·7 per cent.) suffered from congenital syphilis.

15 (5·3 per cent.) from inanition or marasmus.

17 (6·0 per cent.) from debility.

13 (4·6 per cent.) from atelectasis, that is from deficient expansion of the lungs.

Thus at least 174, or 61·9 per cent., undoubtedly died from causes acting chiefly in the ante-natal period. The lives of the majority of them could certainly not have been saved by any system of post-natal visiting or post-natal care. No doubt a large number of the premature births were due to venereal disease of the mothers, and it may be hoped that the opening of Venereal Disease Clinics and the voluntary campaign for combating venereal disease will lessen the number. In addition, the education of the mothers in the hygiene of the ante-natal period, treatment given for the general health, the provision of additional nourishment, and of Home Helps where there is need, should bring down the mortality. We see at the Infant Welfare Centres many mothers who continue to come with older children almost

right up to the time of another confinement, and in this way we obtain the opportunity of advising and treating them in the ante-natal period. Unfortunately not many women come to the Clinics before their first confinements.

The three sets of facts as to (1) the mortality of infants under one month of age, (2) the causes for artificial feeding, and (3) the diseases of mothers seen in the post-natal period, all fit in together to shew that a very large number of the mothers suffer from ailments, for the most part both preventible and curable, which react unfavourably on their power of bearing robust children, of suckling them, and in general of giving them that "good mothering" upon which future health so largely depends.

### MIDWIVES ACT.

During the year 43 trained and 15 untrained midwives signified their intention to practice in the County. Of the births notified, only 1,139 were attended by midwives.

Midwives are badly needed all over the County, especially in the urban districts of Alford, Brigg and Horncastle, and in the rural districts of Louth and Grimsby.

Midwives have started work at Skegness, Crowle, Saxby All Saints, Ulceby, Killingholme, East Halton, Knaith and Reepham.

The notices sent to the Local Supervising Authority were as follows :—

Medical Help	(Mothers)	91
	(Child)	28
Stillbirths	(Macerated)	13
	(Not Macerated)	9
Deaths	(Mother)	—
	(Child)	4
Laying out the dead		8
Exposure to Infection		11
Artificial Feeding		13

Five cases of Ophthalmia were notified, but none of the cases belonged to Midwives.

Eight cases of unsatisfactory condition of eyes were reported, six had been attended by Midwives. All cases recovered with treatment.

Three cases of Puerperal Sepsis were notified, two of these had been attended by Midwives, in one case a Doctor had been called in during labour. Both patients did well.

Two Midwives were reported to the Committee, one for uncleanness of house, and the other for unsatisfactory work, the latter has since left the County.

Eleven women, who had not notified their intention to practice, and who did not hold the certificate of the Central Midwives Board, were reported to the Committee, as they had attended cases without a Doctor being in attendance. In nine cases warning was given by the Committee that they must not attend cases, except under the supervision of a Doctor. In the other two cases it was decided that the women had only acted in emergency.

### COUNTY LABORATORY.

The County Laboratory was again fully taken advantage of by the medical practitioners in the County, especially for assistance in the diagnosis of diphtheria and pulmonary tuberculosis.

Altogether 923 specimens were submitted as follows :—

Swabs for diagnosis of Diphtheria	303	Positive	118
		Negative	185
Clearance swabs after Diphtheria	257	Positive	65
		Negative	192
Sputum query Pulmonary Tuberculosis	350	Positive	65
		Negative	285
Blood for Widal reaction in Typhoid	9	Positive	4
		Negative	5
Other Specimens	4		

The cost of these specimens if sent to an outside laboratory and paid for on their scale of charges would have been £261 13s. 6d. The actual cost of the laboratory in 1920 was £80 7s. 4d.

### NOTIFIABLE INFECTIOUS DISEASES.

In 1920 notifications were received of cases of Malaria (20), Pneumonia (102), Whooping Cough (10), Chicken Pox (31), in addition to the diseases previously notifiable. Excluding these, and taking into account a considerable reduction in Measles notifications, there were altogether 144 more cases of infectious disease notified than in 1919, the chief increase being in cases of Diphtheria and Scarlet Fever. There were actually 160 more cases of **Diphtheria**, the main incidence being in the urban districts of Barton-on-Humber



44 cases, Cleethorpes 42, Gainsborough 44, Scunthorpe 42, and the rural districts of Glanford Brigg 29, Caistor 36, and Gainsborough 38. There were also 181 more cases of **Scarlet Fever**. The majority of the cases being from Scunthorpe and neighbourhood, and 12 more of Enteric Fever. There were 226 fewer cases of Measles reported, and 52 fewer cases of Erysipelas. The number of cases of each disease notified in the sanitary districts is given in Table II.

### **MEASURES TO CONTROL INFECTIOUS DISEASE.**

These remain as described in my Report for 1914. In that report I set out in considerable detail the measures adopted in the districts to check the spread of infectious disease, and particularly the Isolation Hospital provision made by each Local Authority.

It is sufficient to say that none of the Hospitals provide adequate accommodation, and most are unsatisfactory in that they have to be opened before a case can be admitted, which is generally so formidable a process that the hospitals are not used. Ten urban districts and six rural are without any means of isolating cases of infectious disease.

The negotiations for the establishment of a County Isolation Hospital for a group of districts in the north of the county were carried on a further stage in 1920. No further steps have been taken by the County Council to make provision for the isolation of Smallpox.



## MINISTRY OF HEALTH TABLE II. (1920).

THIS TABLE INDICATES THE NATURE AND DISTRIBUTION OF THE CASES NOTIFIED.

SANITARY DISTRICTS.	Total number notified.	Measles and German Measles.	Diphtheria and Membranous Croup.	Erysipelas.	Whooping Cough	Scarlet Fever.	Enteric Fever.	Smallpox.	Puerperal Fever.	Pulmonary Tuberculosis.	Other Tuberculous Diseases.	Poliomyelitis.	Cerebro-spinal Meningitis	Ophthalmia Neonatorum.	Pneumonia.	Malaria.	Chickenpox.	Isolation Hospital.
<b>URBAN.</b>																		
Alford .. ..	6					1				5								No.
Barton-on-Humber ..	101		44	5	7	8				11	9			1		1	15	No.
Brigg .. ..	39	11	10			1				14	3							Yes.
Broughton .. ..	28	17	3	3						1	2					2		No.
Cleethorpes .. ..	416	209	42	17		39	3		1	54	14			6	29	2		No.
Crowle .. ..	8		7			1												No.
Gainsborough .. ..	157		44	6		18			1	76	11				1			Yes.
Horncastle .. ..	32		1	3		7				12	5				3	1		Yes.
Louth .. ..	68	9	10	5		3			1	21	7	1		1	6	4		Yes.
Mablethorpe .. ..	15	8				4				1	1			1				No.
Market Rasen .. ..	17		3	1		1	4			8								Yes.
Roxby-cum-Risby ..	5	2	2							1								No.
Scunthorpe and Frodingham ..	316		42	8		169	1		1	72			1	1	19	2		No.
Skegness .. ..	22		14	1					2	4					1			Yes.
Winterton .. ..	5		2							3								No.
Woodhall Spa .. ..	2			1							1							No.
	1237	256	224	50	7	252	8		6	283	53	1	1	10	59	12	15	
<b>RURAL.</b>																		
Glanford Brigg .. ..	545	400	29	7	3	24	2			27	14		1	1	15	6	16	Yes.
Caistor .. ..	133	48	36	1		18	1			16	3				10			Yes.
Gainsborough .. ..	79		38	1		18	1			20					1			Yes.
Grimsby .. ..	47		8	1		7			1	11	6				12	1		Yes. For Plague, Yellow Fever, &c.
Horncastle .. ..	34			1		13				15					5			No.
Isle of Axholme .. ..	26		6	2		12				3	2			1				No.
Louth .. ..	75		5	2		28	5		1	22	10		1			1		No.
Sibsey .. ..	29	24								4	1							No.
Spilsby .. ..	105		17	7		47				25	9							Yes.
Welton .. ..	32	1	6			12	1		1	9	2							No.
	1105	473	145	22	3	179	10		3	152	47		2	2	43	8	16	
Total for County ..	2342	729	369	72	10	431	18		9	435	100	1	3	12	102	20	31	

## **TUBERCULOSIS.**

The County Council and the District Councils have each responsibilities in the campaign against tuberculosis. The County Council is responsible for the institutional treatment of persons suffering from tuberculosis. The District Councils are responsible for other measures to deal with the disease, such as disinfection, improvement of housing conditions, inspection of diseased meat, and veterinary inspection of dairy cattle.

The reports of the County Medical Staff are forwarded to the district Medical Officers of Health in order that there may be close co-operation in the work.

### **Notification and Following up.**

435 cases of pulmonary tuberculosis and 100 of other forms of the disease were notified in 1920. These cases were visited by the tuberculosis officers, of whom there were five in the year under review. The notifying medical practitioners were invited to consult with the tuberculosis officers as to the treatment most suitable for each case. 307 contacts were examined, of whom 38 were found to be infected. 41 insanitary conditions were reported to the District Medical Officers of Health.

A Conference of Tuberculosis Officers was held several times during the year to discuss clinical and administrative details. This was found to be very helpful in securing uniformity of method. The regular supervisory visits to tuberculous cases were paid by health visitors provided by the Lincolnshire Nursing Association. In 1920 the nursing staff consisted of 27 whole-time Nurses and 27 part-time District Nurses. These combined tuberculosis visiting with school nursing and infant health visiting. The nurses presented regular reports upon the behaviour of the patients in regard to the carrying out of treatment, the sanitary state of their houses, and the condition of shelters where these had been supplied by the Council.

97 shelters were in use at the end of 1920, 63 by insured persons and 34 by non-insured. The nurses made 8,863 visits to patients in the year.

## **DISPENSARIES.**

I give below a table showing the number in attendance at each of the ten dispensaries, with details as to the number of insured and not insured, and whether they attend for

tuberculosis of the lungs or were cases of other tubercular disease, or whether they attended for diagnosis. 2,000 persons attended, namely:—

Insured—369 males and 67 females suffering from pulmonary tuberculosis and 17 males and 6 females from tuberculosis other than of the lungs. Non-Insured—Pulmonary 214 males and 301 females. Non-pulmonary 77 males and 109 females. In addition 410 males and 430 females were under observation.

	INSURED.				NON-INSURED.				DIAGNOSIS.				TOTAL.
	Pulmonary		Non-Pulmonary		Pulmonary		Non-Pulmon'ry		Insured.		Non-Insured.		
	M.	F.	M	F.	M.	F.	M	F.	M.	F.	M.	F.	
Barton..	15	—	2	—	6	8	6	6	4	—	24	20	91
Brigg ..	23	4	2	1	18	21	11	11	6	1	25	38	161
Cleethorpes ..	46	5	4	1	12	33	6	18	1	—	46	50	222
Gainsborough	120	25	—	—	93	128	12	19	—	—	67	99	563
Horncastle ..	23	5	3	—	6	13	—	5	3	1	13	18	90
Lincoln ..	10	2	—	—	4	14	6	6	1	1	17	19	80
Louth ..	53	13	3	2	6	17	4	7	9	6	24	39	183
Market Rasen..	14	2	—	—	8	6	2	1	2	—	14	20	69
Scunthorpe	47	6	3	2	53	52	18	26	20	7	95	84	413
Spilsby ..	18	5	—	—	8	9	12	10	—	—	39	27	128
TOTAL ..	369	67	17	6	214	301	77	109	46	16	364	414	2000

The dispensaries were used during the year as treatment centres as well as consultation centres. Insured persons and ex-service men were given any necessary drug treatment for the relief of distressing symptoms, and also preparations such as cod liver oil and malt, which have a definite food value, and the certificates required by the National Health Insurance Approved Societies and Ministry of Pensions were filled up as and when required. The Ministry of



Health have intimated that the Dispensaries should in future be used more as consultation centres, and that to make this possible treatment at the dispensaries should be given only to persons who cannot otherwise obtain it. In future therefore insured persons and ex-service men will be referred to their panel doctors for treatment, but will be expected to attend periodically at the dispensaries in order that their progress may be noted and that it may be seen whether institutional treatment is required.

It is hoped that in future, under this arrangement, the tuberculosis officers will have the time necessary to carry out the careful clinical examination required for the diagnosis of tuberculosis, and will be able to pass more contacts of patients in review in order to detect the disease in its early stage when measures of treatment are most effective.

The majority of the non-insured patients entered in the above table under the heading Diagnosis—Non-insured, were children who showed a tendency to tuberculosis. They were kept under observation and given general tonic treatment. It would be of great benefit to these children to be educated in the open air. Day Open-air Schools should be established in Brigg, Cleethorpes, Gainsborough and Scunthorpe.

**Sanatoria.**—178 patients received sanatorium treatment in 1920, the average duration of treatment being 10 weeks. Of the 131 who were insured persons, 104 showed improvement as a result of treatment, and 14 showed no improvement, whilst in 13 cases the period of stay was so short reports were not received. There were 23 still in sanatoria at the end of the year. Of the 47 persons treated who were not insured, 26 of whom were advanced cases, 33 were improved, 9 not improved, 4 died, and in one case there was no report as to the condition on discharge. There were 18 non-insured still in sanatoria at the end of the year.

The following tables show where the patients were treated, and the result of treatment :—



## INSURED PERSONS.

SANATORIUM.	No. of Patients sent.				Total	Condition of Patient on discharge or at end of year.				No. still in Sanatorium at end of year.
	Pulmonary.		Non-Pulmonary			Imp.	No Imp.	Died	No Report	
	Males	Females	Males	Females						
Ipswich .. ..	19	8	1	—	28	26	2	—	—	4
Lincoln .. ..	76	12	1	—	89	71	10	—	8	14
Laceby .. ..	3	—	—	—	3	—	2	—	1	3
County Hosp.	1	1	5	—	7	4	—	—	3	1
Kelling .. ..	1	—	—	—	1	1	—	—	—	—
Margate .. ..	—	—	1	—	1	1	—	—	—	—
Preston Hall ..	2	—	—	—	2	1	—	—	1	1
	102	21	8	—	131	104	14	—	13	23

## PERSONS NOT INSURED.

SANATORIUM	No. of Patients sent								Total	Condition of Patient on discharge or at end of year				No. still in Sanatorium at end of year.
	Pulmonary				Non-Pulmonary					Imp.	No Im.	Died	No report	
	Men	Women	Boys	Girls	Men	Women	Boys	Girls						
Laceby . . . .	4	—	1	—	—	—	—	—	5	3	—	1	1	—
Lincoln . . .	—	13	3	1	—	—	—	—	23	13	7	3	—	5
Home of Rest, Derby	—	1	—	—	—	—	—	—	1	1	—	—	—	—
King Ed. VII. Sheffield	—	—	—	—	—	—	1	—	1	1	—	—	—	1
Woodhurst ..	—	2	—	—	—	—	—	—	2	1	1	—	—	—
Margate Sea Bathing Hospital	—	—	—	—	—	—	—	1	1	1	—	—	—	1
Lord Mayor Treloar Cripples' Hosptl.	—	—	—	—	—	—	2	1	3	3	—	—	—	2
St. Catherine's Home, Ventnor	—	—	—	4	—	—	—	—	4	4	—	—	—	2
Holt Children's Sanatorium	—	—	2	—	—	—	—	—	2	2	—	—	—	2
Withernsea ..	—	—	—	5	—	—	—	—	5	4	1	—	—	5
	10	16	6	10	—	—	3	2	47	33	9	4	1	18

Lincoln County Hospital 3 Females X-Rayed.  
 Lincoln County Hospital 2 Out-Patients.  
 One girl supplied with a Thomas Hip Splint.

Negotiations for the purchase of Branston Hall were commenced in 1920, and the Hall has since been acquired together with a little over 100 acres of land. It is hoped that it may be possible to open it as a sanatorium for women and children early in 1922. Plans for a pavilion for 50 men to be erected near to the Hall have been submitted to the Ministry of Health, but approval has been withheld owing to the financial situation. There is only one After Care Committee in the county. It deals with Gainsborough patients.

## VENEREAL DISEASE.

Propaganda Committees were formed by the end of 1920 in Cleethorpes, Gainsborough and Scunthorpe in connection with the National Council for Combating Venereal Disease. Addresses were given to Mothers at Infant Welfare Centres. Treatment Clinics have been regularly held by Dr. White at Grimsby and Lincoln, and by Dr. Tapper at Scunthorpe. Power is required to compel persons known to be suffering from this disease to obtain treatment. It is one of the chief causes of infant mortality, of sterility in women, and of blindness, and requires to be combated by every possible means open to the Health Authority. Women do not attend well. Number of Lindsey patients treated at the Clinics:—

Grimsby . . .	152 cases	
	Syphilis 53, Soft Chancre 10, Gonorrhœa 58.	Conditions other than Venereal 31
Lincoln . . .	44 cases.	
	Syphilis 26, Soft Chancre 2, Gonorrhœa 8.	Conditions other than Venereal 8
Scunthorpe . .	53 male cases	
	Syphilis 26, Soft Chancre 1, Gonorrhœa 20.	Conditions other than Venereal 6
Scunthorpe . .	15 female cases	
	Syphilis 9, Soft Chancre 0, Gonorrhœa 1.	Conditions other than Venereal 5

Total attendances—Male 447. Female 121.

A Clinic should be established at Gainsborough.

## HOUSING.

The Ministry of Health, faced with the fact that practically no houses have been built in this county since 1914, and that in consequence overcrowding was serious in very many districts, and the Local Authorities were unable to deal with insanitary property, did what was possible to encourage Local Authorities to provide houses under the Housing and

Town Planning, &c., Act, 1919. The Authorities surveyed their Districts and prepared an outline scheme for the provision of houses. Several Authorities in this county prepared adequate schemes to meet the need for houses, and commenced building in 1920. Others presented adequate schemes but did not build, being deterred by the high cost. Others again submitted inadequate schemes. In these cases the Ministry caused an inspection to be made and fixed the number of houses required. I have stated the number of insanitary houses in each area in the abstracts of District Reports at the end of this Report, also the number of houses required to replace insanitary property, and to meet the demand for houses, and the number of houses proposed to be erected by the Authority.

The figures given are from the latest reports in my possession, corrected by information received from the Housing Commissioner. The present position in regard to housing is about as unsatisfactory as it can be. At the time of writing, October, 1921, a halt has been called to the scheme for providing houses for the working classes, and there appears to be no likelihood of private enterprise taking its place to meet the need, the crying need that exists for more houses.

Whether houses are provided or not the Local Authorities should do their utmost to secure the repair of insanitary property. In one area the Council have lent to the landlord the necessary money for carrying out repairs and have taken the rent for a period to recoup themselves for the outlay.

## **WATER SUPPLY.**

This is fairly satisfactory in the County as a whole, but public supplies are required in the Fen and Marsh districts, in the Trent side villages and Isle-of-Axholme. A public supply is needed at Broughton. The Local Authorities with public supplies should close all contaminated wells. Requirements in respect to water supply in the districts are given in the abstracts at the end of this Report.

## **COWSHEDS AND MILK SUPPLY.**

There should be a real effort made to ensure clean milk free from tuberculosis. The Local Authorities should require a higher standard both in regard to housing of dairy cattle and to cleanliness in milking. In the matter of housing the County Council should give a lead by providing model cow-houses in small holdings instead of stables with inadequate provision for lighting and ventilation,



## EXCREMENT DISPOSAL.

In the rural districts privy vaults, emptied about once a year, are still as a rule the accepted method of excrement disposal. Very gradually these are being replaced by pail closets. Public scavenging is undertaken in comparatively few villages, but the District Medical Officers of Health are mostly alive to the need for a better provision in this respect, and press for more modern methods in their annual reports. Details of the requirements are given for each district in the abstracts at the end of this Report.

## SEWERAGE AND SEWAGE DISPOSAL.

The works at Ashby and Skegness especially require improvement. Improvements to sewerage and disposal are needed at Barton. Proper sewerage and disposal should be provided at Crowle and for Saxilby. Further details as to requirements are given in the abstracts (q. v.).

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## SALE OF FOOD AND DRUGS ACT.

The County Council administer, through the Police, the Sale of Food and Drugs Act throughout all the districts of the administrative County with the exception of the Borough of Louth, which in 1920 was still a separate authority.

The number of samples submitted for analysis in 1920 totalled 268 as follows :—122 samples of milk, 16 of butter, 30 of margarine, 16 of lard, 5 of spirits, 2 of bread, 4 of flour, 3 of pepper, 1 of mustard, 4 of tea, 3 of coffee, 2 of sugar, 2 of confectionery and jam, 7 of cocoa, 2 of cheese, 8 drugs, and 47 of other articles. Fourteen samples were found to be adulterated as follows :—

Twelve samples of milk were below the authorised standard, one sample of sago was found to consist entirely of tapioca, and 2 samples of borax adversely reported upon were each found to contain 500 parts of arsenic per million.

No samples were submitted for analysis in 1920 by the Borough of Louth.

No samples were taken under the Public Health (Milk and Cream) Regulations, 1912, all being taken in accordance with the provisions of the Sale of Food and Drugs Act.

The Table shows the action taken in regard to each sample adversely reported on by the Public Analyst.



# LINCOLNSHIRE—COUNTY OF THE PARTS OF LINDSEY.

## SALE OF FOOD AND DRUGS ACTS.

Return of the Action taken during the year ended 31st December, 1920, in regard to each Sample adversely reported on by the Public Analyst, showing what legal proceedings have been instituted and the result of proceedings, etc.

Report of Analyst for quarter ended	Number of Sample referred to in Analyst's report.	Description of Sample.	Nature of Adverse Report.	Result of legal Proceedings	Fine	Remarks.
31st March, 1920	G.G. 792	Milk	9% extraneous water	Convicted	£2	
do.	B. 600	Milk	2% extraneous water and 19% milk fat deficient	Dismissed	—	
do.	W. 784	Milk	3% extraneous water and 12% milk fat deficient	Convicted	10/-	
30th June, 1920	S. 798	Milk	16% milk fat deficient	Convicted	£5	
do.	S. 804	Milk	6% milk fat deficient	No p'ceedings	—	
do.	S. 802	Sago	100% Tapioco	do.	—	
do.	G.G. 796	Milk	7% milk fat deficient	do.	—	
do.	G.G. 813	Milk	15% extraneous water	Convicted	£5	
30th Sept., 1920	M. 604	Milk	12% milk fat deficient	Dismissed	—	
do.	W. 805	Milk	6% do.	Convicted	10/-	
do.	W. 803	Milk	3% extraneous water	Dismissed	—	
do.	W. 802	Milk	9% do.	Dismissed	—	
31st Dec., 1920	G. 89	Borax	500 parts Arsenic per mill.	No p'ceedings	—	
do.	G.G. 821	Milk	21% milk fat deficient	Convicted	£4	
do.	G.G. 816	Borax	500 parts Arsenic per mill.	Convicted	£1	



ABSTRACT  
OF  
Reports of District  
Medical Officers of Health.



## URBAN DISTRICTS.

### ALFORD U.D.

Medical Officer of Health :—G. A. Bosson, M.B., M.R.C.S.

Sanitary Inspector :—A. W. Plowright.

Area in Acres—1,138. Density of Population—2·0 per acre.

	Census 1901.	Census 1911	Estimated 1920.
Population	2478	2394	2297

Chief Occupations :—Agriculture, Brewing.

Birth Rate.	Infantile Mortality.		Death Rate.	Phthisis Death Rate.	Tuberculosis all forms. Death Rate.
	Total.	Illegitimate.			
19·15	45·45	333·3	10·44	·86	·86

Annual Report of Medical Officer not received.

Housing.—Insanitary 50. Required 100. To be erected by Council 12. One house built in 1920.

Further Sanitary requirements :—

1. The closing of polluted wells and extension of public water supply.

2. The abolition of privy vaults and conversion to water carriage.

3. The abolition of the 275 ashpits and substitution of covered bins.

4. Systematic house to house inspection. Insistence on repair of all insanitary house property worth repair, paving of yards, provision of sufficient closet accommodation, etc.

### BARTON-ON-HUMBER U.D.

Medical Officer of Health in 1920 :—Wm. G. Loveridge,  
L.R.C.P. & S.

Medical Officer of Health in 1921 :—F. P. H. Birtwhistle,  
M.B., Ch.B.

Sanitary Inspector :—J. C. Stevenson.

Area in Acres—6,343. Density of Population 1·04 per acre.

	Census 1901.	Census 1911.	Estimated 1920.
Population	5671	6676	6604

Chief Occupations :—Cycle Works, Ropery Works, Brick and Cement Works.

Birth Rate.	Infantile Mortality.		Death Rate.	Phthisis Death Rate.	Tuberculosis all forms. Death Rate.
	Total.	Illegitimate.			
28·11	54·05	142·85	10·44	1·82	2·57

An epidemic of Diphtheria occurred in 1920, 44 cases being reported.

Housing.—Insanitary 176. Required 280. To be erected by Council 16. 24 houses have been repaired.

Further Sanitary requirements :—

1. Improvements in drainage and sewerage, particularly in regard to pollution at outfall in Barton Haven and conversion of closets to water carriage system.

2. Refuse Destructor.

3. The carrying out of a Housing Scheme.

4. Bye-Laws.

5. Isolation Hospital Accommodation.

#### BRIGG U.D.

Medical Officer of Health :—Francis J. O. King, M.B., B.Ch.

Sanitary Inspector :—E. K. Clark.

Area in Acres—462. Density of Population—7·1 per acre.

	Census 1901.	Census 1911.	Estimated 1920
Population	3137	3343	3311

Chief Occupations :—Jam Factor      Motor Engineers.  
Agricultural Foundries, Oil and Cake Mills.

Birth Rate.	Infantile Mortality. Total.	Mortality. Illegitimate.	Death Rate.	Phthisis Death Rate.	Tuberculosis all forms. Death Rate.
26·81	56·17	—	9·66	0·8	0·6

Ten cases of Diphtheria were reported in 1920.

Housing.—Insanitary 90. Required 200. To be erected by Council 200. 24 houses were erected in 1920, 3 have been repaired and 2 closed.

Further Sanitary requirements :—

1. Public Water Supply to south side of Bridge Street and other streets.

2. Separation of storm water from sewage.

3. Conversion of pail closets to water carriage system.

4. Refuse Destructor and more general use of covered bins.

5. Out offices of Church Schools badly constructed and ill-ventilated.

6. Impermeable receptacles for refuse in slaughter houses.

7. Veterinary inspection of dairy cattle.

8. Disinfector.

9. Isolation Hospital Accommodation.

## BROUGHTON U.D.

Medical Officer of Health :—Francis J. O. King, M.B., B.Ch.  
Sanitary Inspector :—G. Dinsdale.

Area in Acres—7073. Density of Population—23 per acre not uniformly distributed.

	Census 1901	Census 1911	Estimated 1920
Population	1,300	1,382	1,655

Chief Occupations :—Iron Stone Mining, Agriculture.

Birth Rate.	Infantile Mortality.		Death Rate.	Phthisis Death Rate.	Tuberculosis all forms. Death Rate.
	Total.	Illegitimate.			
25·37	47·6	—	7·85	0·6	0·6

Housing.—Insanitary 59. Required 34. To be erected by Council 22. Four Houses are in course of erection to replace 4 in an unhealthy area. Five have been repaired.

Further Sanitary requirements :—

1. A Public Water Supply.
2. A Public Scavenging System.
3. Enlargement, repairs and a better water supply to Broughton School.
4. A steam disinfecter.
5. Isolation Hospital Accommodation.
6. The carrying out of the Housing Scheme.

## CLEETHORPES U.D.

Medical Officer of Health :—Victor G. Best, M.D., B.A.  
Sanitary Inspector :—Edward Turner, C.R.S.I.

Area in Acres—1,185. Density of Population 22·5 per acre.

	Census 1901	Census 1911.	Estimated 1920.
Population	12,578	21,419	26,696

Chief Occupation—Fishing.

Birth Rate.	Infantile Mortality.		Death Rate.	Phthisis Death Rate.	Tuberculosis all forms. Death Rate.
	Total	Illegitimate.			
27·9	61·74	156·2	11·23	1·16	1·38

42 cases of Diphtheria were reported, mostly from the South and Central Wards.

Complaints of pollution of the Carr Drain have again been received.

17 privies have been converted to water carriage. Only 14 now remain.

Refuse collection has been improved, and a 40 h.p. motor Lorry is now in use. The Destructor continues to deal satisfactorily with the refuse. 1,000 new ashbins have been provided in 1920.



1,648 defects and nuisances have been abated.

A number of businesses have been added to the list of Offensive Trades in the district.

Housing.—Insanitary 98. Required 430. To be erected by Council 136.

Further Sanitary Requirements :—

A more adequate Housing Scheme.

#### CROWLE U.D.

Medical Officer of Health :—W. H. M. Alexander, M.B.C.M.

Sanitary Inspector :—Ernest A. Chapman.

Area in Acres—6.926. Density of Population .45 per acre.

	Census 1901	Census 1911	Estimated 1920
Population	2769	2853	3120

Chief Occupations :—Agriculture, Peat Moss Manufacture, Brewing, Brickworks, Flax Mill.

Birth Rate.	Infantile Mortality. Total.	Illegitimate.	Death Rate.	Phthisis. Death Rate.	Tuberculosis all forms. Death Rate.
28.84	111.11	—	20.19	1.28	1.6

Housing —Insanitary 126. Required 142. To be erected by Council 20. Only 1 house built in 1920.

13 nuisances were abated.

Further Sanitary Requirements :—

1. The provision of adequate housing accommodation.
2. Systematic inspection of houses and enforcement of repairs.
3. A better water supply.
4. The abolition of privy middens.
5. Refuse to be kept in properly covered bins.
6. Paving of yards to be insisted upon. There is great neglect in this respect.
7. Isolation Hospital and Disinfector.

#### GAINSBOROUGH U.D.

Medical Officer of Health :—J. A. Hackett, M.B., Ch.B.

Sanitary Inspector :—W. H. Temble.

Area in Acres—2,406. Density of Population—8.3 per acre

	Census 1901.	Census 1911	Estimated 1920.
Population	17,660	20,589	19,971



Chief Occupations :—Engineering, Oil and Seed Crushing, Timber Factors, National Filling Factory, Ship Building.

Birth Rate.	Infantile Mortality		Death Rate.	Phthisis	Tuberculosis
	Total.	Illegitimate.		Death Rate.	all forms. Death Rate.
26·23	74·33	45·45	12·23	1·35	1·8

44 cases of Diphtheria were reported in 1920.

Improvements to drainage and sewerage have been carried out.

72 pail closets have been converted to water carriage.

467 nuisances were abated.

Housing.—Insanitary 157. Required 300. To be erected by Council 300. 3 houses were built during 1920.

Further Sanitary Requirements :—

1. Housing scheme to be completed as soon as practicable.
2. Completion of the conversion of pail to water closets.
3. Ashpits to be replaced by covered bins.
4. The closure of Trinity School and provision of a new School. The provision of an Open-air School.
5. Provision of a Hospital for pulmonary tuberculosis.
6. Provision of a Clinic for venereal disease.

#### HORNCastle U.D.

Medical Officer of Health :—Arthur Boulton, M.R.C.S.,  
L.R.C.P., D.P.H.

Sanitary Inspector :—F. Weeber.

Area in Acres—1421. Density of Population 2·4 per acre.

	Census 1901	Census 1911.	Estimated 1920
Population	4038	3900	3423

Chief Occupation :—Agriculture and associated trades.

Birth Rate.	Infantile Mortality.		Death Rate.	Phthisis	Tuberculosis
	Total.	Illegitimate.		Death Rate.	all forms Death Rate.
20·44	114·28	258·71	17·23	1·46	1·75

Disastrous Flood on 29th May, 1920, 200 houses flooded. All inspected and tenants advised on health measures. No immediate serious effect on health followed.

Housing.—Insanitary 20. Required 16. To be erected by Council 10. Four houses were built in 1920.

8 nuisances abated. 1 well condemned.

3 privy vaults converted to water closets.

Further Sanitary Requirements :—

1. Conversion of all privy vaults to water closets.
2. Replacement of ashpits by covered bins.
3. Improvement of floor of cowsheds and bakehouses.

## LOUTH MUNICIPAL BOROUGH.

Medical Officer of Health :—Edward Shartley, M.D.

Sanitary Inspector :—Herbert Allison.

Area in Acres—2749. Density of Population 3·42.

	Census 1901.	Census 1911.	Estimated 1920.
Population	9518	9883	9441

Chief Occupation :—Motor Body Works, Engineering Works, Glove Factory, Pea Picking Factory, Jam Factory, Agricultural Implement Works.

Birth Rate.	Infantile Mortality.		Death Rate.	Phthisis Death Rate.	Tuberculosis all forms Death Rate.
	Total.	Illegitimate.			
22·56	79·81	125	20·01	1·21	1·6

Disastrous Flood.—On May 29th a phenomenal rainfall in the town and neighbouring villages caused a disastrous flood which inundated a large portion of the town lying by the River Lud, and caused very serious damage. Many houses were completely flooded, some being swept away. Unfortunately twenty-three persons perished in the flood.

In the flooded area several inches of mud were deposited in the houses and the removal of this and the debris was a source of great trouble and anxiety, which was much alleviated by the willing assistance of voluntary workers. Every house was disinfected daily for some time, being visited and reported upon to the Medical Officer of Health by members of an improvised Committee. Owing to this and the cool dry weather which prevailed for some weeks no epidemic occurred, and the health of the town remained normal.

From North Elkington, the only village which possessed a rain-gauge, it was reported that 4½ inches fell in 3 hours, which is unprecedented in this country.

There is reason to believe that no steps have been taken to prevent the holding up of water by a low bridge and by a mill dam in the event of another flood occurring.

Housing.—Insanitary 360 (several unhealthy areas). Required 245. To be erected by Council 54. 133 houses in flooded area repaired. 37 closed.

The sanitation of the Borough is very far from being satisfactory.

#### Further Sanitary Requirements :—

1.—Systematic house to house inspection and the enforcement of improvements such as conversion of privies,

paving of yards, repair of roofs, provision of ashbins and external and internal repairs.

2. Safeguarding of water supply by proper storage and filtration.

3. Refuse Destructor.

### MABLETHORPE U.D.

Medical Officer of Health :—J. Iredale, M.B.E., L.R.C.P & S.  
Sanitary Inspector :—R. Francis.

Area in Acres—3,168. Density of Population 42.

	Census 1901.	Census 1911.	Estimated 1920.
Population	934	1232	1329

Chief Occupation :—Seaside Resort. Agriculture.

Birth Rate.	Infantile Mortality		Death Rate.	Phthisis Death Rate.	Tuberculosis all forms. Death Rate.
	Total.	Illegitimate.			
14.29	Nil	Nil	14.29	.75	1.5

The pump at the sewage works has been repaired.

Housing.—Insanitary 1. Required 0.

Further Sanitary Requirements :—

1. Isolation Hospital Accommodation.
2. Disinfectors.

### MARKET RASEN U.D.

Medical Officer of Health :—D. F. Torrens, B A., M.B.,  
D.P.H.

Sanitary Inspector :—C. R. Herring.

Area in Acres—976. Density of Population 2.2.

	Census 1901.	Census 1911.	Estimated 1920.
Population	2188	2296	2134

Chief Occupation :—Agriculture and associated occupations

Birth Rate.	Infantile Mortality.		Death Rate.	Phthisis Death Rate.	Tuberculosis all forms. Death Rate.
	Total.	Illegitimate.			
17.33	81.08	—	10.77	46	93

Medical Officer's Annual Report not received.

Housing.—

Further Sanitary Requirements :—

1. Improved Sewerage.



2. Adequate housing. No improvement to property being enforced owing to scarcity of houses.

3. Conversion of privy vaults to water closets.

4. Substitution of bins for ashpits.

### ROXBY-CUM-RISBY U.D.

Medical Officer of Health :—E. J. Tongue, M.R.C.S.

Sanitary Inspector :—Thomas Jewitt.

Area in Acres—4,908. Density of Population ·12.

Population	Census 1901.		Census 1911.		Estimated 1920.	
	378		389		621	
Birth Rate.	Infantile Mortality.		Death Rate.	Phthisis Death Rate.	Tuberculosis all forms. Death Rate.	
27.37	117.64	—	16.10	Nil	Nil	

Chief Occupations :—Agriculture. Ironstone Mining (adjacent areas).

One house built at Dragonby in 1920.

There would appear to be 3 houses requiring repair.

No houses being provided by Council.

Further Sanitary Requirements :—

1. Improvement of drainage of Dragonby.
2. Water supply at Sawcliffe should be improved.
3. Isolation Hospital Accommodation.

### SCUNTHORPE U.D.

Medical Officer of Health :—Kenneth E. Tapper, O.B.E., M.B., D.P.H.

Sanitary Inspector :—Joseph Gallagher, C.R.S.I., M.S.I.A.

Area in Acres—7,895. Density of population 3·66 per acre.

Population	Census 1901.		Census 1911.		Estimated 1920.	
	11,232		19,677		29,037	

Chief Occupations :—Ironstone Mining and Steel Works.

Birth Rate.	Infantile Mortality.		Death Rate.	Phthisis Death Rate.	Tuberculosis all forms. Death Rate.	
28.20	98.90	25	11.22	.61	.92	

166 cases of Scarlet Fever and 29 of Diphtheria were notified between May and December. The death rate from Diphtheria was twice the average rate in England and Wales. Parents generally disregard the instructions as to isolation.

Dairy cattle are inspected by a Veterinary Inspector. 3 cows were found with tuberculosis of the udder, and in 10 others the disease was suspected.

Housing.—Insanitary—Full numbers not yet known. Required 4,142. To be erected by Council 2,142. To be erected by Public Utility Societies and Steel Firms 2,000. During 1920 22 houses under the Council scheme were completed and occupied, and 296 were nearing completion. Public Utility Societies and private builders completed 179 houses, while 296 were nearing completion. Total 191 completed and 506 almost completed.

There are several unhealthy areas. 200 houses supplied with ashbins by notice to owners. An electric refuse cart has been purchased.

Pollution from the Bottesford Beck with tar from coke ovens was dealt with.

Further Sanitary Requirements :—

1. Abolition of shallow wells in district.
2. Improvement of effluent from Scunthorpe and enlargement of Frodingham Sewage Works. Modern system of sewage treatment for Ashby and Santon. Regular flushing of all sewers.
3. Conversion of conservancy system to water carriage.
4. Refuse Destructor.
5. Isolation Hospital.
6. Maternity Hospital.
7. Open-air School.
8. Improvement of quality of milk supply.
9. Abolition of private slaughterhouses.
10. Bye-laws to control Fried Fish Shops.
11. Improvement in sanitation of schools.

#### SKEGNESS U.D.

Medical Officer of Health :—Stanley Wallace, M.R.C.S.,  
L.R.C.P.

Sanitary Inspector :—R. H. Jenkins, C.R.S.I.

Area in Acres—1,922. Density of Population 1·7 per acre.

	Census 1901.	Census 1911.	Estimated 1920.
Population	2140	3775	3390

Chief Occupation :—Seaside Resort.

Birth Rate.	Infantile Mortality		Death Rate.	Phthisis Death Rate.	Tuberculosis all forms. Death Rate.
	Total.	Illegitimate.			
24·18	36·58	—	16·22	1·47	1·47

A District Nursing Association has been established.

Land has been acquired adjoining the Waterworks at Welton, where an additional boring is to be made to supplement the water supply.

A Disinfector has recently been purchased.

Housing.—Insanitary 7. Required 100. To be erected by Council 102. 72 commenced in 1920 and 2 completed.

Further Sanitary Requirements :—

1. Improvement of Isolation Hospital accommodation.
2. Additional bore to supplement water supply.
3. Improved sewage disposal. New scheme strongly recommended.
4. Bi-weekly collection of refuse in summer.
5. Substitution of sanitary bins for ashpits.
6. Greater efficiency in scavenging and watering streets.
7. Measures to improve the cleanliness of the milk supply.
8. Veterinary inspection of dairy cattle for tuberculosis.
9. Public Abbatoir.
10. Vigorous campaign against Venereal Disease.
11. Repairs urgently required in certain houses.
12. More stringent measures for dealing with tents, vans and moveable dwellings.
13. More Public Convenience accommodation.

#### WINTERTON U.D.

Medical Officer of Health :—W. I. T. Baker, L.R.C.P. & S.  
Sanitary Inspector :—W. H. Buttrick.

Area in Acres—3,818. Density of Population ·41 per acre.

	Census 1901.	Census 1911.	Estimated 1920.
Population	1361	1426	1587

Chief Occupations :—Agriculture. Ironstone Mining in adjacent areas.

Birth Rate.	Infantile Mortality		Death Rate.	Phthisis Death Rate.	Tuberculosis all forms. Death Rate.
	Total.	Illegitimate.			
26·46	71·42	200	15·75	2·52	2·52



The sewer in Earlsgate Road has been lengthened.

All cowsheds have been supplied with water.

Housing.—Insanitary 17. Required 87. To be erected by Council 20. 6 houses were erected and occupied in 1920.

Further Sanitary Requirements :—

1. More adequate housing.
2. Isolation Hospital.
3. Privies should be converted to water closets.
4. Bins for refuse should be insisted upon.

### WOODHALL SPA U.D.

Medical Officer of Health :—Arthur Boulton, M.R.C.S.,  
L.R.C.P., D.P.H.

Sanitary Inspector :—E. Salmon.

Area in Acres—1,874. Density of Population 79 per acre.

	Census 1901.	Census 1911.	Estimated 1920.
Population	988	1484	1479

Chief Occupation :—Health Resort.

Birth Rate.	Infantile Mortality		Death Rate.	Phthisis Death Rate.	Tuberculosis all forms. Death Rate
	Total.	Illegitimate.			
18·25	74·07	—	10·81	Nil	Nil

The area for the deposit of sludge at the sewage disposal works has been enlarged.

Housing.—Insanitary 6. Required 26. To be erected by Council 6.

Steps have been taken to destroy the larvae of mosquitoes which have been a pest in the district.

Further Sanitary Requirements :—

1. Isolation Hospital accommodation.
2. Privy vaults should be converted to pail closets in rural portion of district.

## RURAL DISTRICTS.

### CAISTÖR R.D.

Medical Officer of Health :—Alexander Fraser, M.D.

Sanitary Inspector :—J. P. Mason.

Area in Acres—120,108. Density of Population ·09.

	Census 1901.	Census 1911.	Estimated 1920.
Population	13,288	13,147	10,870

Chief Occupation :—Agriculture.

Birth Rate.	Infantile Mortality		Death Rate.	Phthisis Death Rate.	Tuberculosis all forms. Death Rate.
	Total.	Illegitimate.			
30·35	72·72	125	14·35	·82	·82

Annual Report not received from either Medical Officer or Sanitary Inspector.

Housing.—Insanitary 89. Required 247. To be erected by Council 247.

### GLANFORD BRIGG R.D.

Medical Officer of Health :—Francis J. O. King, M.B., B.Ch.

Sanitary Inspectors :—F. Stubbins.

B. V. Brodie.

Area in Acres—121.183. Density of Population ·2.

	Census 1901.	Census 1911.	Estimated 1920.
Population	23,822	29,898	24,503

Chief Occupation :—Agriculture, Ironstone Mining in adjacent areas, Cement Works, Maltkilns, Fish Manure Works.

Birth Rate.	Infantile Mortality		Death Rate.	Phthisis Death Rate.	Tuberculosis all forms. Death Rate.
	Total.	Illegitimate.			
25·71	79·36	153·84	12·28	·65	·77

Annual Report of Medical Officer not received.

Housing.—Insanitary 136. Required 256. To be erected by Council 110. 54 houses were built in 1920 in the western area of the district, and 28 in the eastern area.

Sewerage improved in Kirton Lindsey, Wrawby, Hibaldstow and Ulceby. Improvements effected at Fish Manure Works at South Killingholme.

Further Sanitary Requirements :—

1. Veterinary Inspection of dairy cows for tuberculosis.
2. Better water supply for Burringham, East Butterwick, Burton Stather and Ulceby.

3. Sanitary bins in villages with public scavenger.
4. Systematic house to house inspection and insistence on carrying out of repairs, including the paving of yards.

### GAINSBOROUGH R.D.

Medical Officer of Health :—H. B. Willoughby Smith, F.R.C.S.

Sanitary Inspector :—R. Maxwell.

Area in Acres—94,706. Density of Population ·15.

	Census 1901.	Census 1911.	Estimated 1920.
Population	14,543	14,742	10,870

Chief Occupations :—Agriculture, Engineering and Iron-stone mining in adjacent areas.

Birth Rate.	Infantile Mortality		Death Rate.	Phthisis Death Rate.	Tuberculosis all forms. Death Rate.
	Total.	Illegitimate.			
22·83	54·87	—	11·27	·69	·83

Milk.—Cows regularly inspected by Veterinary Surgeon for tuberculosis.

Housing.—Insanitary 280. Required 294. To be erected by Council 294.

“ Schemes for additional houses in Blyton and Haxey were prepared and ready for execution when the Housing Commissioner stopped them.” 1 wooden house has been built in 1920.

Further Sanitary Requirements :—

The most pressing are those relating to housing, namely, the repair of insanitary property and the provision of the large number of additional houses required.

### GRIMSBY R.D.

Medical Officer of Health : G. O. McKane, L.R.C.P.

Sanitary Inspector :—Jas. H. Evans, M.S.I.A.

Area in Acres—43,301. Density of Population ·25.

	Census 1901.	Census 1911.	Estimated 1920.
Population	5434	10,629	11,191

Chief Occupations :—Agriculture, Dock Workers, Fish and Oil Works, Railway Works, Paper Factory, Timber Factory.

Birth Rate.	Infantile Mortality		Death Rate.	Phthisis Death Rate.	Tuberculosis all forms. Death Rate.
	Total.	Illegitimate.			
28·05	85·98	—	10·9	·62	·8

Sewerage.—Scheme for Immingham being carried out.



Milk Supply.—Circulars giving directions as to cleanliness sent to all cow keepers.

Scavenging.—Public scavenging introduced at Scartho and Great Coates.

Housing.—Insanitary—Number not stated. Required apart from replacing insanitary houses 183. To be provided by Council 183. 53 bungalows and 14 houses built privately in 1920. 12 houses are in course of erection by Council at Immingham.

Isolation Hospital. Arrangements have been made to make it possible to open the Hospital at Immingham for cases of sea borne disease at an hour's notice.

Further Sanitary Requirements :—

1. Systematic house to house inspection and insistence on repairs of insanitary property. The Sanitary Inspector does not seem to have time for this essential part of his work.
2. Provision of houses to meet the demand.
3. Veterinary inspection of dairy cattle.
4. Public scavenging in all large villages.

#### HORNCASTLE R.D.

Medical Officer of Health :—Arthur Boulton, M.R.C.S.,  
L.R.C.P., D.P.H.

Sanitary Inspector :—J. H. Holmes.

Area in Acres—114,153. Density of Population ·11.

	Census 1901.	Census 1911.	Estimated 1920.
Population	13,468	13,102	11,605

Chief Occupation :—Agriculture.

Birth Rate.	Infantile Mortality		Death Rate.	Phthisis Death Rate.	Tuberculosis all forms. Death Rate.
	Total.	Illegitimate.			
24·04	53·76	125	10·25	·68	·86

Housing.—Insanitary 180. Required 200. To be erected by Council 200. 8 new houses erected privately in 1920. 4 were closed as unfit for habitation. 56 houses repaired. In two cases the Council carried out necessary repairs for the owners, receiving the rent until recouped for the outlay.

33 pail closets converted to water closets, 12 privies converted to pail closets. A number of drainage improvements carried out.

Further Sanitary Requirements :—

1. The completion of the Council's housing scheme.
2. Isolation Hospital accommodation.
3. Scavenging in the larger villages and abolition of privies and ashpits.

## ISLE -OF-ANHOLME R.D.

Medical Officer of Health :—Arthur F. Messiter, M.R.C.S.,  
L.R.C.P.

Sanitary Inspector :—Benjamin West.

Area in Acres—28,070. Density of Population ·19.

	Census 1901.	Census 1911.	Estimated 1920.
Population	6680	6816	5603

Chief Occupations :—Agriculture, Ironstone Mining in adjacent areas.

Birth Rate	Infantile Mortality		Death Rate.	Phthisis Death Rate.	Tuberculosis all forms. Death Rate.
	Total.	Illegitimate.			
30·16	71·00	153·84	16·59	·71	·89

Housing.—Insanitary—"many"—definite number not stated. Required 36. To be erected by Council 36, but none started owing it is said to cost of material and labour, and lack of builders. A demand for cottages in all the parishes and overcrowding at Althorpe and Keadby is reported. 3 houses have been built privately in 1920.

The open channel drainage at Epworth is brushed out daily and disinfectants used as required. Sewerage at Garthorpe, Eastoft and Belton has been cleaned out and relaid. At Luddington a sanitary dyke has been piped.

The sanitation of schools has been supervised.

Further Sanitary Requirements :—

1. Improved housing accommodation.
2. Public scavenging in larger villages, and abolition of privy vaults and ash pits.
3. Isolation Hospital accommodation.
4. Veterinary inspection of dairy cattle for tuberculosis.

## LOUTH R.D.

Medical Officer of Health—W. J. Wilkinson, M.R.C.S.,  
L.R.C.P.

Sanitary Inspector :—F. Higginson.

Area in Acres—154,627. Density of Population ·11.

	Census 1901.	Census 1911.	Estimated 1920.
Population	18,506	18,285	18,094

Chief Occupation :—Agriculture.

Birth Rate.	Infantile Mortality		Death Rate.	Phthisis	Tuberculosis
	Total.	Illegitimate.		Death Rate.	all forms. Death Rate.
22·33	62·17	58·82	13·15	1·21	1·6

Sewage and Excrement Disposal.—Twenty five privies were converted into pail closets during the year, and 17 new pail closets erected. The sewers at Welton-le-Wold had to be relaid after the flood of 29th May, 1920.

Housing.—Insanitary 142–180. Required 203–279. To be erected by Council 203. 19 houses were built in 1920. 66 were repaired. 105 houses are unfit for habitation, but still occupied.

Further Sanitary Requirements :—

1. Improvement of housing an urgent matter. Access to bedrooms by ladder should be altered to staircases.
2. Isolation Hospital accommodation.
3. Public Scavenging in the larger villages.
4. Veterinary inspection of dairy cattle.

#### SIBSEY R.D.

Medical Officer of Health :—Arthur Tuxford, M.D.

Sanitary Inspector :—Samuel Steeper.

Area in Acres—21,565. Density of Population ·15.

	Census 1901	Census 1911.	Estimated 1920.
Population	2880	2985	3244

Chief Occupation :—Agriculture.

Birth Rate.	Infantile Mortality		Death Rate.	Phthisis	Tuberculosis
	Total.	Illegitimate.		Death Rate.	all forms. Death Rate.
23·11	80·00	—	13·87	1·23	1·84

Housing.—Insanitary 124. Required 160. To be erected by Council 154. The scheme is being held up owing to inability of Housing Commissioner to approve Tenders. Generally speaking cottages in the district are of poor construction, ill planned, and in bad repair. 45 unfit houses are still occupied.

Further Sanitary Requirements :—

1. A progressive housing policy. The adoption of Bye-Laws. Systematic house to house inspection and insistence on repairs being carried out. Ladders to bedrooms should be replaced by staircases. Yards should be properly paved.



2. An improved water supply.
3. Abolition of privy vaults and ashpits and public scavenging in larger villages.

## SPILSBY R.D.

Medical Officer of Health :—F. J. Walker, C.B.E., M.D.,  
L.S.Sc.

Sanitary Inspector :—Jno. E. Bolt, M.I.M.I., A.R.S.I.  
C. Whitworth.

Area in Acres—128,211. Density of Population ·15.

	Census 1901.	Census 1911.	Estimated 1920.
Population	20,506	21,014	20,108

Chief Occupation :—Agriculture.

Birth Rate.	Infantile Mortality		Death Rate.	Phthisis Death Rate.	Tuberculosis all forms. Death Rate.
	Total.	Illegitimate.			
22·52	88·30	205·13	13·27	·84	1·14

Housing.—Insanitary 119. Required 211. To be erected by Council 174. 87 houses were repaired in 1920, and 16 new houses built.

Further Sanitary Requirements :—

1. The vigorous prosecution of the Council's progressive housing policy.
2. A better water supply to the Fen district.
3. Isolation Hospital accommodation.
4. School Sanitation requires attention.

## WELTON R.D.

Medical Officer of Health :—Wm. Sharrard, M.B., Ch.B.

Sanitary Inspector :—A. W. M. Gilbert.

Area in Acres—83,712. Density of Population ·13.

	Census 1901	Census 1911.	Estimated 1920.
Population	11,228	11,113	11,381

Chief Occupation :—Agriculture.

Birth Rate.	Infantile Mortality		Death Rate.	Phthisis Death Rate.	Tuberculosis all forms. Death Rate.
	Total.	Illegitimate.			
21·70	56·68	71·42	10·80	·79	1·14

Closet accommodation. Eleven pail closets were substituted for privy vaults and two water closets replaced dry receptacles.

Housing.—Insanitary 51. Total requirements 179. To be erected by Council 179. 40 unfit houses are still occupied. 5 new houses built privately in 1920.

Further Sanitary Requirements :—

1. Housing policy should be vigorously carried out, including provision of new cottages and repairs to existing ones that are insanitary. Yards should be paved.

2. The long delayed provision of a pure water supply to Saxilby should be undertaken as soon as possible. The well water in this village is polluted. The Lincoln main passes through the village.

3. Public scavenging in larger villages.

4. Excrement disposal in Bardney and Saxilby should be by water carriage.

5. Eventual system of sewage treatment at Saxilby before discharge into the Foss Dyke.

6. Adoption of Bye-laws.

